DOCUMENT RESUME

ED 381 130 IR 017 045

AUTHOR Martinez, Joseph P.; Woods, Muriel
TITLE Faculty Service Needs Assessment: The Value and Planned Use of Educational Technology at Auraria.
INSTITUTION Auraria Media Center, Denver, CO.
PUB DATE 6 Mar 95
NOTE 102p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS Audiovisual Aids; *College Faculty; Educational Equipment; *Educational Media; *Educational Technology; Higher Education; *Learning Resources Centers; Multimedia Materials; *Needs Assessment; Surveys; Use Studies
IDENTIFIERS *Auraria Media Center CO; Faculty Attitudes

ABSTRACT

The Auraria Media Center conducted a needs assessment in the spring of 1994 to learn whether it correctly perceived, and how it can better serve, the changing educational technology needs of faculty. Faculty from the Community College of Denver, Metropolitan State College of Denver, and the University of Colorado at Denver responded to an anonymous survey. Based on the seven research questions, results show: (1) a substantial percentage of Auraria faculty see educational technology, including newer technologies like multimedia, as important to very important to higher education; (2) three-fourths of the campus faculty use the media center at least occasionally; (3) most educational technologies are valued highly by most faculty; (4) faculty generally are satisfied with Media Center products and services; (5) faculty are somewhat hesitant about using many technologies in the classroom; (6) traditional media (i.e., overheads) are still more preferred than new media (i.e., multimedia); and (7) many faculty are more concerned with equipment and facilities than with products and services. The implication is that most faculty at Auraria are hesitant to extend beyond current levels of educational technology use or integrate new media into their curricula even though they perceive a high value of educational technology. Seven figures illustrate the findings on the seven research questions. Twenty-seven appendices provide copies of the cover letter and questionnaires; figures illustrating different breakdowns of data; a summary of the assessment process; the Auraria Media Center staff feedback memo; a staff question list; and a summary of staff input into the assessment process. (Contains 18 references.) (Author/MAS)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

IR

ED 381 130

FACULTY SERVICE NEEDS ASSESSMENT

The Value and Planned Use of Educational Technology at Auraria

March 6, 1995

Auraria Media Center
University of Colorado at Denver
Metropolitan State College of Denver
Community College of Denver

Prepared by

Joseph P. Martinez
Instructional Designer

Muriel Woods
AMC Director

Assistance in the design of the assessment strategy and interpretations contained in this report was provided by Roberta Morrow, James K. Straub, Larry Wood, and other staff at the Auraria Media Center, Denver, Colorado.

IR017045

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Joseph P. Martinez

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

Table of Contents

Abstract....1
Introduction....2
Problem Definition....3
Purpose....4
Questions....5
Methodology....6
Phase One
Study Design....6
Phase Two
Field procedures....6
Participants....7
Materials....8
Methodological Issues....9
Data Reduction....10
Results....11
Interpretations....12
1. Delivery Systems....14
2. Distance Education....15
3. Equipment Services....16
4. Instructional Design....17
5. Instructional Resources....18
6. Media Production....19
7. Technical Systems Support....20
Implications....21
Absence of Skills and Knowledge....22
Absence of Incentive or Improper Incentive....22
Absence of Environmental Support....23
Absence of Motivation....23
Interpretation Summary....24
Conclusion....25
References....27

Appendices

Abstract

The Auraria Media Center conducted a needs assessment during Spring 1994 to learn whether it correctly perceived—and how it can better serve—the changing educational technology needs of faculty on the Auraria Campus. Faculty from the academic institutions that comprise Auraria, which include Community College of Denver, Metropolitan State College of Denver, and the University of Colorado at Denver, were asked to respond to an anonymous canvas survey. Between 12 to 15 percent of faculty from each of the three institutions responded to the survey (N = 280).

Based on seven research questions, results show—as expected—that a substantial percentage of Auraria faculty (1) see educational technology, including newer technologies like multimedia, as *important to very important* to higher education. At the same time, the planned use of educational technology, especially newer technologies, in the classroom received a lesser response. Results also show that (2) three-fourths of campus faculty use the Media Center at least occasionally, (3) most educational technologies are valued highly by most faculty, (4) faculty are generally satisfied with Media Center products and services, (5) faculty are somewhat hesitant about using many technologies in the classroom, (6) *traditional media* (e.g., overhead projectors) are still more preferred than *new media* (e.g., multimedia), and (7) many faculty are more concerned with equipment and facilities than with products and services. There were no major differences in these areas among the three institutions.

The principal implication of this study is that most faculty at Auraria are somewhat hesitant to extend beyond current levels of educational technology use—or integrate *new media*—in their curricula, even though they perceive a high value of educational technology. The varied reasons for these findings will require further exploration but some possible explanations are considered.

Meanwhile, mainstream experts in the fields of cognitive science, instructional technology, and telecommunications are calling for extended uses of technology in higher education; not just because it can expand educational access and improve teaching efficiency, but mainly because it can enhance the educational experience of students.

Introduction

> Educational technology "is a complex, integrated process involving people, procedures, ideas, devices and organization, for analyzing problems, and devising, implementing, evaluating and managing solutions to those problems, involved in all aspects of human learning."
>
> (AECT Task Force, 1977, p. 164)

The term *educational technology* has long been associated with the audio-visual equipment and learning materials maintained by media centers serving educational institutions (Saettler, 1968). But more recently it has come to mean much more (Saettler, 1990). With increasingly systematic use and expanding purposes, media centers in higher education are now the nucleus for other technology-related functions such as delivery and reception systems, instructional design (including analysis, development and evaluation), media production, and technical support.[1] The evolution of the meaning of educational technology has mirrored the progress with which it has affected education.

Understanding the educational technology needs of faculty in higher education is a complex and ever-changing issue for media centers (Albright, 1989). As the capabilities of technology change, so do the needs of its users. In the case of higher education faculty, there is a continuum between those who would rather see educational technology advance gradually—if at all—and those who would embrace it wholeheartedly. Some are content to be patient—if not grudgingly opposed—to the inclusion of new technologies into their curricula. Others want it now, even if the new technology is a developing *instructional* concept such as hypermedia.

The Auraria Media Center conducted a needs assessment during Spring 1994 to learn whether it correctly perceived—and how it can better serve—the changing educational technology needs of faculty on the Auraria Campus. This report focuses on questions about educational technology at Auraria which have emerged as a result of the assessment process. Descriptions of the Auraria Media Center are available elsewhere and details will only be noted here where useful in interpreting the results of the needs assessment. Additionally,

---

[1] One should keep in mind while reading this report that the educational technology functions of the Auraria Media Center are to supplement and facilitate the instructional strategies of faculty, not replace either. One major purpose of educational technology is to free the teacher from some tasks and thereby enable him or her to attend more to roles that are uniquely human.

adequate descriptions of each academic institution at Auraria are offered in various publications, and will not be reiterated here.

Auraria is an urban campus serving a diverse student population. The academic institutions that comprise the campus are Community College of Denver (CCD), Metropolitan State College of Denver (MSCD), and the University of Colorado at Denver (UCD). CCD is a two-year institution offering associate degrees and boasts the most diverse student body of all higher education institutions in Colorado. MSCD is the largest baccalaureate-degree-only institution in the United States. UCD is one of four campuses in University of Colorado system and the only institution at Auraria offering both undergraduate and graduate degree programs.

Faculty at Auraria bring varying credentials and experience to the wide-ranging curricula offered on campus. Faculty range from full-time scholars to part-time professionals to visiting honoraria. The broad range of degree programs and faculty teaching styles makes it difficult for the Media Center to verify and predict the educational technology needs of faculty at Auraria. Therefore, Auraria faculty, the focus of this needs assessment, were asked to respond to a mail survey about those needs.

Problem Definition

Kaufman (1982) defines *need* (a noun) as a *gap* between "what is" and "what should be," specifically pertaining to results. Kaufman, Stakenas, Wager, and Mayer (1981) define *need* as "... a discrepancy—a difference in results—not necessarily a deficit or deficiency" (p. 18). Similarly, Rothwell and Kazanas (1992) describe *need* as a performance gap between what people "know, do or feel," and what they should "know, do or feel." Following this line of thinking, the Auraria Media Center wanted to know more about the educational technology needs of faculty at the Auraria Campus; that is, to verify or reject that any gaps or discrepancies actually exist between what the center is doing, and what it should be doing.

Purpose

As with any professional field that deals with high technologies, there is a constant need for the Media Center to reflect on its role in the evolution of technology on campus. For example, specific questions such as what delivery systems to plan for and whether to invest more in *traditional media* or *new media* are common dilemmas. *Traditional media* are defined here as presentation equipment typically used in the classroom over the last decade. These include overhead projects, slide projectors, video recorders/players, and the like. *New media* refers to new presentation technologies that are emerging in the nineties. These include CD-Rom equipment, presentation equipment for microcomputers, and distance education technologies such as interactive teleconferences.

A more complex question, for example, is whether the Media Center should actively promote the value and planned use of educational technology on campus. Media Centers need to ask and answer these kinds of questions all of the time. Answers to these questions should and will be constructed based on feedback provided by faculty in the needs assessment questionnaire.

Stated broadly, the overriding purpose for conducting the needs assessment was to determine systematically if there are things the Media Center should continue to do or change, or things it could acquire, to narrow the gaps between current levels of service and other aspects of service needed or desired by campus faculty. Recognizing these gaps will guide the Media Center staff to:

A. better understand the educational technology needs and desires of faculty,

B. make informed decisions on organizational objectives based on faculty needs,

C. make informed decisions about services and products in order to achieve organizational objectives, and

D. evaluate organizational effectiveness based on predetermined criteria.

As a result, services will be improved.

Secondary purposes of the questionnaire include informing faculty of the various services provided by the Auraria Media Center, and preparing a baseline report of Media Center services from which follow-up studies may be conducted in the future.

Questions

To determine those things the Media Center could be doing, or things it could acquire, to better respond to the educational technology needs of campus faculty, the following research questions were addressed:

1. **What are the gaps between perceived value (level of importance) and planned use of educational technology at Auraria?** This question asked about the extent to which faculty perceive educational technology as important (value), and how frequently they plan to use various technologies in their curricula. If there are significant differences between *value* and *planned use*, then the Media Center should take action to close the gap.

2. **How often do faculty use the Auraria Media Center?** This question was designed to simply gauge the extent that participants perceive themselves using the Media Center.

3. **How do Auraria faculty perceive the importance of educational technology services offered by the Auraria Media Center?** *Section A* of the faculty questionnaire asked participants to state how important to higher education are 14 of the Media Center's diverse functions.

4. **How do faculty feel about the quality of Media Center products and services?** Participants were asked, in *Section B* of the questionnaire, to make known their feelings about the quality of Media Center services and products.

5. **How often do faculty plan to use educational technology for everyday instruction?** *Section C* asked faculty to state how often they plan to use the 14 Media Center functions listed.

6. **What are current and upcoming needs of Auraria faculty with regard to media equipment?** *Section D* listed various media equipment and asked participants if they "use," "would use," or "don't need" specific items.

7. **What are other media-related things faculty may need?** Faculty were prompted in *Section E* of the questionnaire to list other things they might need.

The needs assessment was, in summary, a systematic approach to learning more about the educational technology needs of faculty on the Auraria campus.

Methodology

The faculty service needs assessment was conducted in two phases by the Auraria Media Center. Phase One involved an internal assessment in which staff at the Media Center were asked to help determine the issues and structure to be addressed in the study. Phase Two involved an external assessment survey, administered by anonymous questionnaire, in which an attempt was made to reach all faculty from the three institutions on campus. Among other things, the *Faculty Service Questionnaire* asked participants if and how much they value educational technology and to estimate how often they plan to use those technologies in the classroom.

Phase One: Study Design

The needs assessment process officially began in January 1994 at a Media Center staff retreat. Staff were invited to participate in the evolution of the process. It was determined that a systematic approach to thinking about faculty needs would garner the most reliable data, and a job-aid for thinking about the process was distributed to staff at that time. Staff were also told that they would be asked more formally to raise issues which could be included in the survey and to comment on their perceptions of faculty needs within a few weeks.

In February, staff were asked to respond to an open-ended "question list" that followed generally a systematic process put forth by Rossett (1987). The questionnaire sought (staff's) perceptions of (faculty's) important needs, the reasons those needs exist, possible solutions to those needs, and obstacles to suggested solutions.

Information received from staff, both informally and from the internal questionnaire, was then analyzed for inclusion in the external needs assessment. (To view summary comments from this phase, see Appendices, pages 69-71.)

Phase Two: Field procedures

In mid-to-late April, the *Faculty Service Questionnaire* was mailed out to faculty at all three Auraria institutions. In an effort to reach all full-time, part-time, and honorarium

faculty on campus, 2,095 copies of an anonymous questionnaire were sent to every known campus faculty member.

As faculty in higher education are often difficult to contact personally , it was determined that a canvas mailing was reasonable and economical, and would give every campus faculty member an opportunity to respond provided they received their mail. This procedure required that several administrative assistants determine how many faculty are listed for every campus office. That number of faculty per office served as the number of questionnaires sent to the office box number. Questionnaires were color coded to identify participants by institution. Faculty were asked to respond within three weeks, but questionnaires were received and included for seven weeks.

Responses to the survey were collected and entered into a computer program/database by student staff workers. The computer program was designed by the Media Center for maintenance and storage of individual responses. Several staffers assisted in verifying the accuracy of the data entries and a computer function was written to locate impossible answers (i,e., outside the numerical scale for questionnaire items) and other faulty data that required correcting. The data was then output to a text format readable by statistical software.

Participants

Of the 2,095 questionnaires that were distributed, 280 were returned. The overall return rate was 13 percent. The return rates for CCD, MSCD, and UCD—respectively—were 12, 15, and 13 percent of the target population. (see Appendices, page 5, for count and percentage charts.)

The canvas mailing resulted in large enough sample size to warrant some inferencing about the campus population. There were, however, some unknowns about the non respondents. Mail surveys typically have low response rates (Jaeger, 1988), yet the procedure was designed to give all faculty an equal chance to respond. A questionnaire is also more likely to deliver relevant, quantifiable data than, say, interviews or observations (Jaeger, 1988). Although the

length of the instrument (51 items) would contribute to a lower response rate, the Media Center administration made a cognizant decision to try to obtain more data that would be useful immediately as well as in the future. Therefore, of the 51 items, most were fixed-scale response and only six were open-ended questions. Several spurious factors may have accounted for non responses. These may have included non responses due to absences (e.g., sabbaticals), improper mail delivery or recent address change, general apathy, lack of familiarity with the service, or an unwillingness to participate. To encourage participation, the Media Center offered small instructional support items, such as computer diskettes and blank videotapes, to those who returned a registration sheet that was attached to the questionnaire. To maintain anonymity, participants were asked to return the registration sheet separately. Of the 280 survey respondents, 269 returned registration sheets.

It would take a stretch of the imagination to characterize the participants—and faculty in general at Auraria—other than as higher education faculty. Due to the diversity of academic programs and employment status, there is little we know about them that would be any different than at any other public, higher education institutions. We do know, generally, that most campus faculty hold advanced degrees in their field, and are typically between the ages of 30 and 60.

Materials

Job aid. To establish a systematic approach for Media Center staff to think about the educational technology needs of faculty, a job aid was developed based on an outline elaborated by Allison Rossett (1987). The job aid, entitled "What do Auraria Faculty *Really* Want and Need" defined the needs assessment process, including the purpose, various approaches, and the kinds of information needed. (To view this document, see Appendices pages 65-66.)

Planning form. A "question list," was designed to assist Media Center staff in contributing what they know and feel—based on many years of serving faculty—to the process of the needs

assessment. (To view the cover letter and internal "question list," see Appendices, pages 67-68.)

Faculty Service Questionnaire. This instrument was a two-page "structured questionnaire" consisting of 51 questions. Most of the questions are Likert scaled response items, however six items are open-ended. The questionnaire began with an opening question about how often the participant uses Media Center services. The rest of the instrument was divided into five sections which address the various research questions identified at the beginning of this report. (To view the cover letter and *Faculty Service Questionnaire,* see Appendices, pages 2-4.)

Methodological Issues

As with any action-oriented research, there are some methodological issues we wish to acknowledge. First, this report is driven by the perceived needs of the participants, not by theory building. Therefore, it was decided that all faculty would be given an opportunity to respond to the questionnaire, rather than by chance through a random or cluster sampling. The non response error is therefore a consideration. Also, there is a definite question about construct validity in the forced-answer, scaled-response items. For example, the term *often* will likely mean something quite different to many of the participants; moreover, the term will always mean something quite different depending on whether the client is co-producing an instructional television series, seeking a one-time consultation on course design, or checking out an overhead projector. It was decided that trying to quantify the scope of *planned use* would make the questionnaire infinitely lengthy and would certainly confound any measurable perceptions among participants across functional areas. Therefore, a term such as *important* is dependent on the participants' perception of the term, but, interestingly, those self-report items are measured against their own perceptions of comparison items, such as the term *often*. It does not give us a numerical count of interactions or days, but it informs us of the gap, or need, as perceived by faculty themselves.

Data Reduction

Data from the response forms was entered by hourly students into a computer program—*Needs Assessment Stack*—created at the Media Center. The raw data was verified for accuracy and output to a text format readable by *StatView 4.01*.

Descriptive statistics, including frequency distributions and percentage charts by total, and by institution, were computed for each of the 45 scaled-response items. (For descriptive statistics and frequency distributions on each individual questionnaire item, see Appendices, pages 6-40.) The entire text is listed for all open-ended items and extraneous comments that appeared on returned questionnaires. (To read comments, see Appendices, pages 41-47.) Frequency analysis was performed on the most used key words appearing in the text, using the computer program *Semantic Tools*. (For frequency tables, see Appendices, pages 48-51.)

Ranking, in descending order of mean scores, was also performed on items within sections A, C, and D, excluding open-ended items (i,e., "Other, please specify"). There was insufficient cell size on all open-ended items to warrant inclusion in rankings and comparisons. (For ranking tables on sections A, C and D, see Appendices, pages 52-59.)

Comparisons, between parallel items with regard to *importance* (Section A) and *planned use* (Section C) were made by comparing mean scores. These comparisons are depicted in column graphs to emphasize trends. (See Appendices, pages 60-63). To emphasize consistency among the three institutions with regard to equipment use, a column graph of mean scores from Section D of the questionnaire is also presented. (See Appendices, page 64.)

To further explain the findings of the needs assessment, percentages are used in the results section. Percentages are derived from the number of respondents that emerge in each cell of the Likert scaled response items on the faculty questionnaire.

Scaled response cells for items in sections A of the faculty questionnaire are interpreted as (5) *Very Important*—(4) *Important*—(3) *Moderately Important*—(2) *Unimportant*—(1) *Very Unimportant*.

Scaled response cells for items in Section C are (5) *Almost Always*—(4) *Very Often*—(3) *Often*—(2) *Seldom*—(1) *Almost Never.*

Results

Overall Results

Below is a listing of the seven research questions addressed in the faculty questionnaire, along with a brief summation of results.

1. **What are the gaps between perceived value (level of importance) and planned use of educational technology at Auraria?**

   a) A large proportion of participants placed a high *value* on all fourteen of the educational technology services listed in Section A. An average of 42 percent—ranging from 36 to 92 percent—of all participants rated each service at least *important* or *very important.*

   b) Section C of the questionnaire asked participants about their *planned use* of the same Media Center services listed in Section A. A lower percentage of respondents, an average of 10 percent—ranging from 8 to 65 percent—said they plan to use these services *very often* or *almost always.* On nine items, participants indicated they plan to use the service *seldom to almost never.*

   c) Comparison results from participants who selected (4) *important* to (5) *very important* on section A and (4) *very often* to (5) *almost always* on section C, reveals that there was a 32 percent differential between high *value* and frequent *planned use.*

2. **How often do faculty use the Auraria Media Center?**

   a) Most participants—75 percent—use Media Center services at least *occasionally.* A sizable percentage—42 percent—also said they use the Media Center *often to almost always.* Some faculty—26 percent—said they use Media Center services *seldom to almost never.*

3. **How do Auraria faculty perceive the importance of educational technology services offered by the Auraria Media Center?**

   a) Many participants, an average of 42 percent perceived Media Center services as *important to very important.* An average of 84 percent perceived all fourteen services at least *moderately important.* No services were seen by a majority as *unimportant* or *very unimportant,* with combined percentages of these categories ranging from 2 to 35 percent.

4. **How do faculty feel about the quality of Media Center products and services?**

   a) Ninety-five percent (95%) of participants said they *agree* to *strongly agree* that "Media Center personnel are always courteous and eager to help."

b) Ninety-one percent (91%) of participants said they *agree* to *strongly agree* that "services are of high quality."

5. **How do faculty plan to use educational technology for everyday instruction?**

   a) A ranking of 14 Media Center services listed in Section C of the faculty questionnaire revealed that participants plan to use technical and equipment services moreso than consultative or creative services. (See Appendices, page 52 for item rankings.)

   b) Most participants (> 50 %) said they expect to use newer technologies, such as distance education, instructional design, and multimedia authoring *seldom to almost never.*

6. **What are current and upcoming needs of Auraria faculty with regard to media equipment?**

   a) Participants said they expect to use *traditional media,* such as overhead projectors and video cassette recorders much more often than *new media* such as CD-ROM equipment or LCD panels. (see Appendices, page 56 for rankings)

7. **What are the other media-related things faculty may need?**

   a) Content analysis of extraneous comments and open-ended answers from Section D of the questionnaire revealed that roughly 62 percent of faculty respondents who included comments were more concerned with *equipment* (40 percent) and *facilities* (22 percent) than with *media/multimedia* (20 percent) and *products/services* (18 percent).

Interpretations

Seven Functional Areas

Albright (1992) created the Integrated Instructional Technology Services (IITS) model to categorize the broad mission of educational technology centers in higher education. The model classifies many of the functions of educational technology that pertain to the Auraria Media Center, but also to academic computing services. Some elements of Albright's model have been borrowed and adapted here to fit the functional areas of the Media Center at Auraria.

The functions of the Media Center are varied and usually overlap among Media Center departments. For example, the production and technical services departments must work together to produce instructional television programs. Likewise, the departments of media equipment services and technical services need to work together to establish technical systems such as closed-circuit program delivery, and to maintain and repair equipment. Therefore, the

functional areas described below are classified according to some elements included in the IITS model, but more specifically reflect the functions of the Auraria Media Center. The seven functional areas of the Auraria Media Center are: (1) Delivery Systems, (2) Distance Education, (3) Equipment Services, (4) Instructional Design, (5) Instructional Resources, (6) Media Production, and (7) Technical Systems Support.

Parallel individual items from sections A and C of the *Faculty Services Questionnaire* will now be grouped together and listed for each relevant functional area. Some questionnaire items pertain to more than one functional area.

To identify the gaps that have emerged from within each functional area, the differential between how faculty *value* a given item (from Section A) is compared to faculty's *planned use* of that item (from Section C). Following a brief assessment of each area is a column graph that summarizes the findings.

(please continue onto next page)

1. Delivery Systems

Delivery Systems is the umbrella term for the following functions:

Item 8. Installation of media/data equipment in selected classrooms

Eighty-four (84) percent see this service as *important to very important;* fifty-three (53) percent plan to use this service *very often to almost always.*

Item 13. Sending and/or receiving interactive teleconferences

Forty-one (41) percent see this service as *important to very important;* ten (10) percent plan to use this service *very often to almost always.*

Item 14. Video and fiber optic delivery systems

Forty-five (45) percent see this service as *important to very important;* fourteen (14) percent plan to use this service *very often to almost always.*

The three services identified in the Delivery Systems functional area each display a gap between *value* and *planned use.* (see Figure 1.)

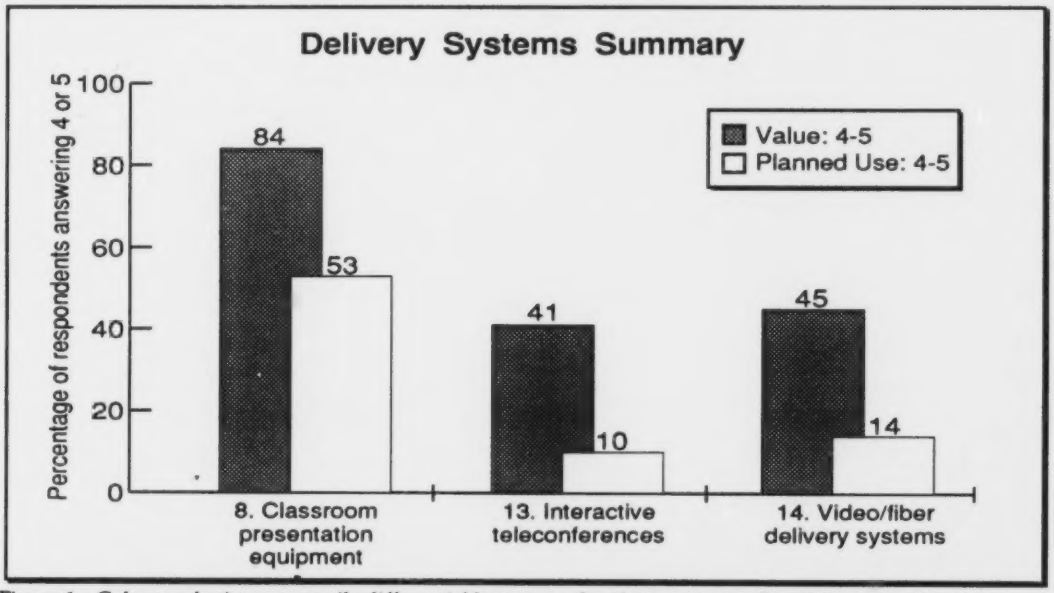


Figure 1. Columns depict a percentile differential between *value* (4-important to 5-very important) and *planned use* (4-very often to 5-almost always) on each of the three service items included in the Delivery Systems functional area. For example, 41 percent of faculty place a high value on interactive teleconferences, but only 10 percent of faculty plan to use this service very often.

2. Distance Education

Item 5. Distance education consultation and production

Thirty-six (36) percent see this service as *important to very important;* eight (8) percent plan to use this service *very often to almost always.*

Item 13. Sending and/or receiving interactive teleconferences

Forty-one (41) percent see this service as *important to very important;* ten (10) percent plan to use this service *very often to almost always.*

Item 14. Video and fiber optic delivery systems

Forty-five (45) percent see this service as *important to very important;* fourteen (14) percent plan to use this service *very often to almost always.*

The three service areas identified in the Distance Education functional area each display a gap between *value* and *planned use.* (see Figure 2.)

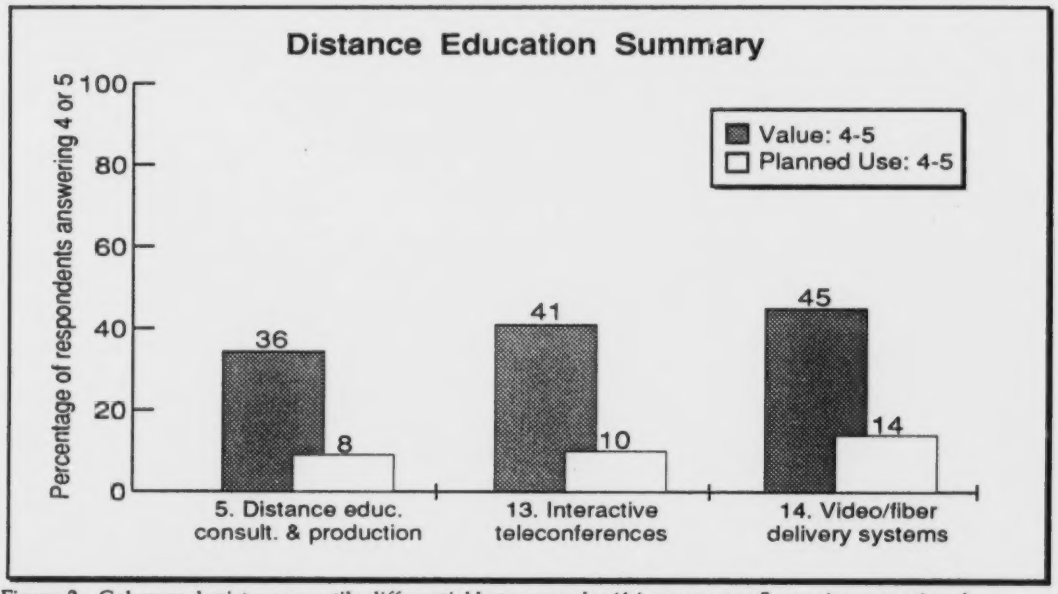


Figure 2. Columns depict a percentile differential between *value* (4-important to 5-very important) and *planned use* (4-very often to 5-almost always) on each of the three service items included in the Distance Education functional area.

3. Equipment Services

Item 1. Checking out media equipment

Ninety-one (91) percent see this service as *important to very important;* sixty-five (65) percent plan to use this service *very often to almost always.*

Item 6. Equipment consultation and systems design

Forty-two (42) percent see this service as *important to very important;* thirteen (13) percent plan to use this service *very often to almost always.*

Item 9. Maintenance and repair of equipment

Ninety-two (92) percent see this service as *important to very important;* fifty-six (56) percent plan to use this service *very often to almost always.*

The three service areas identified in the Equipment Services functional area each display a gap between *value* and *planned use.* (see Figure 3.)

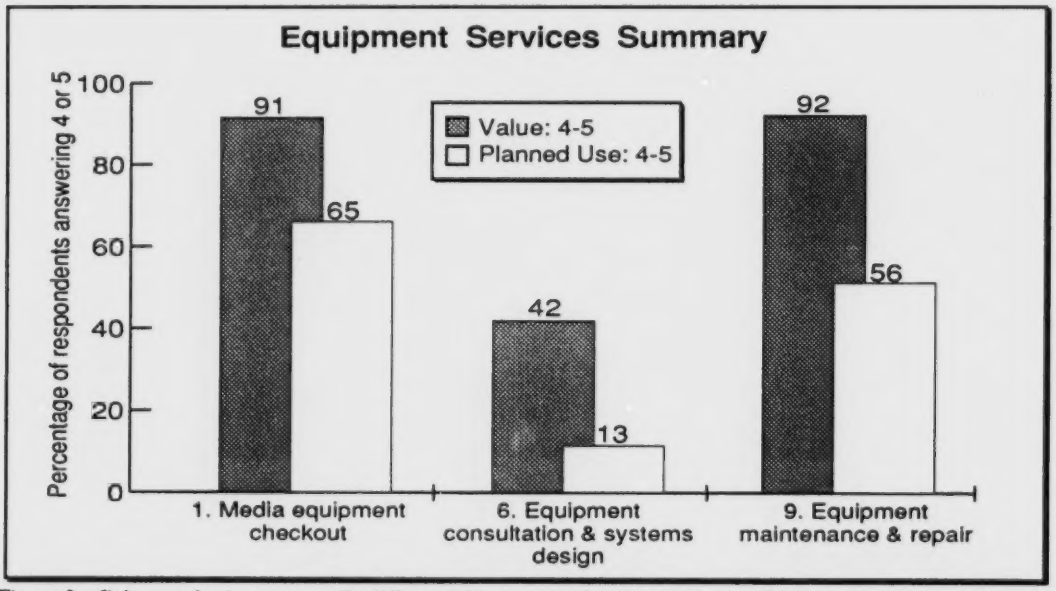


Figure 3. Columns depict a percentile differential between *value* (4-important to 5-very important) and *planned use* (4-very often to 5-almost always) on each of the three service items included in the Equipment Services functional area.

4. Instructional Design

Item 2. Analysis, design and/or evaluation of instructional media

Forty-six (46) percent see this service as *important to very important;* fifteen (15) percent plan to use this service *very often to almost always.*

Item 3. Design and development of computer-based instruction

Forty-six (46) percent see this service as *important to very important;* fourteen (14) percent plan to use this service *very often to almost always.*

Item 4. Design and production of instructional materials (graphics, video, overhead transparencies, computer-based instruction)

Fifty-nine (59) percent see this service as *important to very important;* twenty-six (26) percent plan to use this service *very often to almost always.*

The three service areas identified in the Instructional Design functional area each display a gap between *value* and *planned use.* (see Figure 4.)

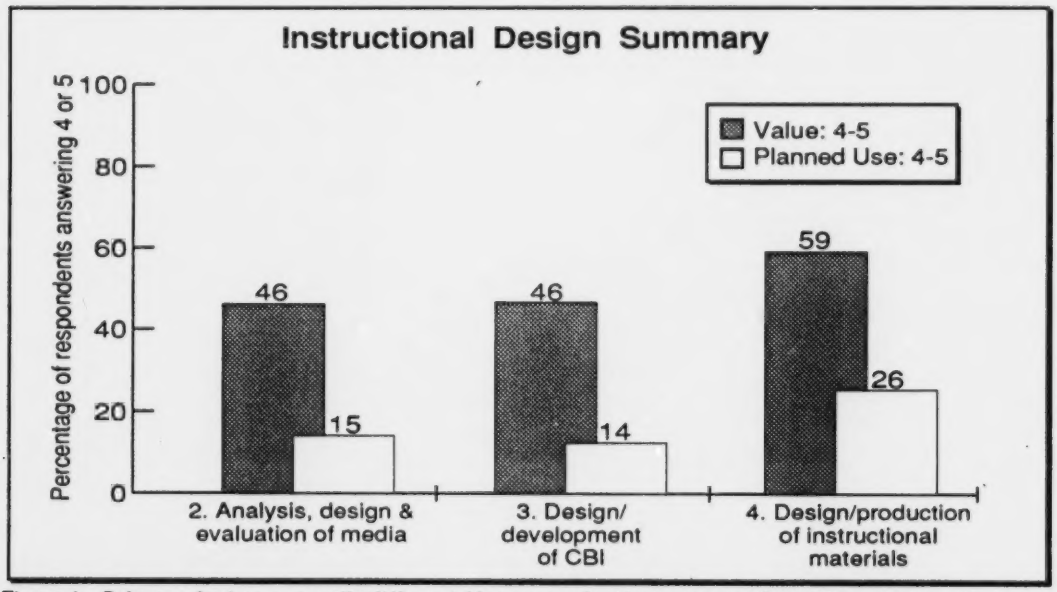


Figure 4. Columns depict a percentile differential between *value* (4-important to 5-very important) and *planned use* (4-very often to 5-almost always) on each of the three service items included in the Instructional Design functional area.

5. Instructional Resources

Item 7. Film and video checkout and/or rental

Eight-four (84) percent see this service as *important to very important;* sixty (60) percent plan to use this service *very often to almost always.*

Item 10. Making copies of existing media, *with required copyright permission* (audio or video cassettes)

Sixty (60) percent see this service as *important to very important;* thirty-two (32) percent plan to use this service *very often to almost always.*

Item 12. Recording off-air and satellite transmitted video programs

Forty-eight (48) percent see this service as *important to very important;* nineteen (19) percent plan to use this service *very often to almost always.*

The three service areas identified in the Instructional Resources functional area each display a gap between *value* and *planned use.* (see Figure 5.)

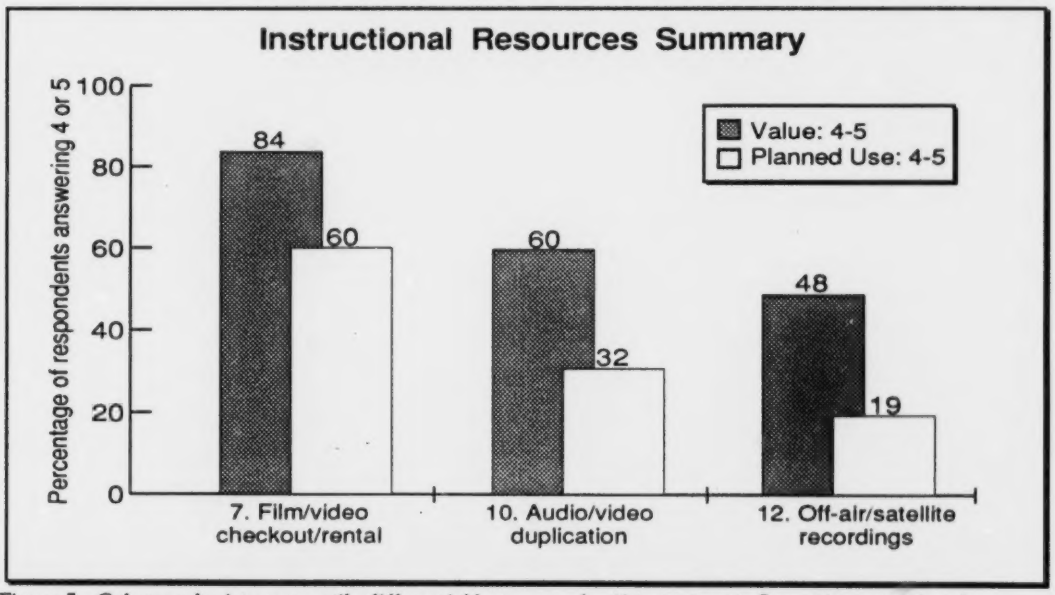


Figure 5. Columns depict a percentile differential between *value* (4-important to 5-very important) and *planned use* (4-very often to 5-almost always) on each of the three service items included in the Instructional Resources functional area.

6. Media Production

Item 4. Design and production of instructional materials (graphics, video, overhead transparencies, computer-based instruction)

Fifty-nine (59) percent see this service as *important to very important;* twenty-six (26) percent plan to use this service *very often to almost always.*

Item 5. Distance education consultation and production

Thirty-six (36) percent see this service as *important to very important;* eight (8) percent plan to use this service *very often to almost always.*

Item 11. Multimedia (CD-Rom) authoring and mastering

Forty-five (45) percent see this service as *important to very important;* sixteen (16) percent plan to use this service *very often to almost always.*

The three service areas identified in the Media Production functional area each display a gap between *value* and *planned use.* (see Figure 6.)

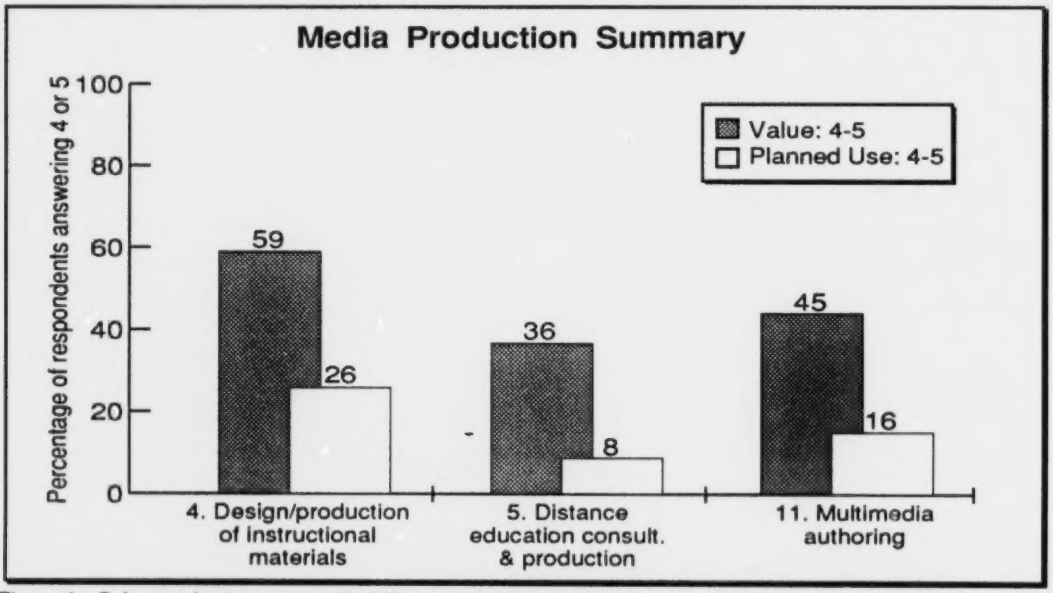


Figure 6. Columns depict a percentile differential between *value* (4-important to 5-very important) and *planned use* (4-very often to 5-almost always) on each of the three service items included in the Media Production functional area.

7. Technical Systems Support

Item 6. Equipment consultation and systems design

Forty-two (42) percent see this service as *important to very important;* thirteen (13) percent plan to use this service *very often to almost always.*

Item 8. Installation of media/data presentation equipment in selected classrooms

Eighty-four (84) percent see this service as *important to very important;* fifty-three (53) percent plan to use this service *very often to almost always.*

Item 9. Maintenance and repair of equipment

Ninety-two (92) percent see this service as *important to very important;* fifty-six (56) percent plan to use this service *very often to almost always.*

The three service areas identified in the Technical Systems Support functional area each display a gap between *value* and *planned use.* (see Figure 7.)

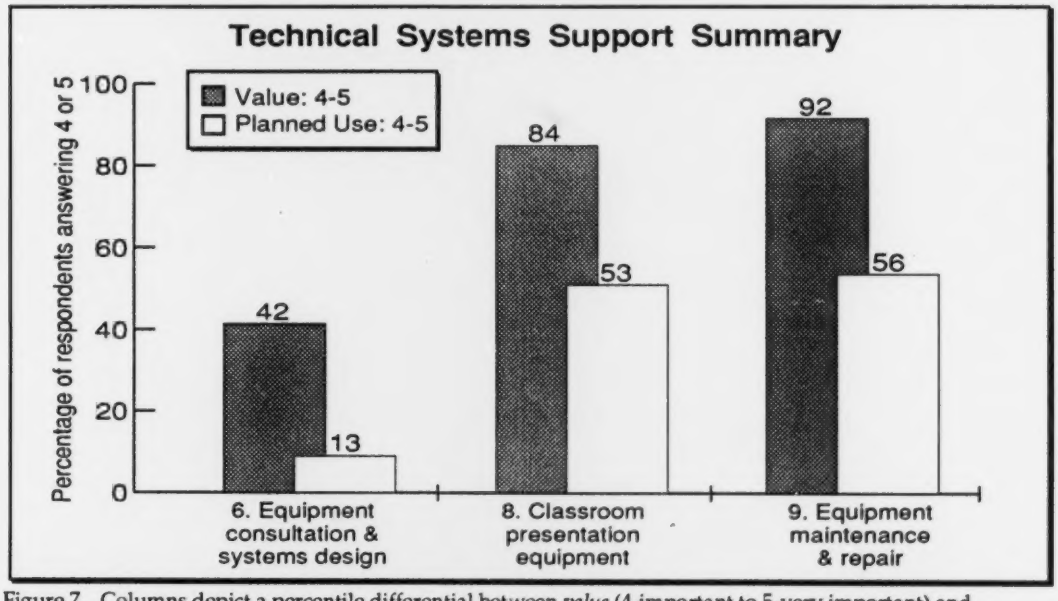


Figure 7. Columns depict a percentile differential between *value* (4-important to 5-very important) and *planned use* (4-very often to 5-almost always) on each of the three service items included in the Technical Systems Support functional area.

Implications

The needs assessment reveals that most campus faculty place a high value on educational technology, yet many are hesitant about frequently integrating technology in the classroom. This gap between *value* and *planned use* is clearly identified in all seven of the Media Center's major functional areas. The next phase in the Media Center's effort to keep pace with the educational technology needs of faculty is to begin defining solutions that will reduce those gaps.

Hammond, et al. (1992) attempted to identify factors that serve as "blocks to the effective use of information technology in higher education." A seminar in the United Kingdom brought together several experts with experience in educational technology and organizational issues in higher education. The experts reviewed three surveys on faculty's views on the use of computers in teaching. Many of the key factors identified, however, apply to more than just computers. For example, *lack of time* and *financial constraints* are major factors which influence or cause a faculty member to avoid using any of a number of educational technology functions. Other blocks may include *lack of training, lack of support staff, lack of information on existing educational materials, inadequate product quality,* and *lack of information about the potential and benefits* of a given technology. The primary finding from surveys analyzed in the Hammond study is that many of these barriers are compatible with "a general lack of institutional concern."

Rossett (1987, 1991) defines four types of causes for gaps that can be identified in a needs assessment. They include (1) absence of skills & knowledge, (2) absence of incentive or improper incentive, (3) absence of environmental support, and (4) absence of motivation. Each gap or deficiency is caused by the absence of something. In order to determine a solution to the gaps between *actuals* (the way things are) and *optimals* (the way things ought to be) one must first attempt to identify the cause.

Absence of Skills and Knowledge

Cause. If faculty at Auraria are hesitant to integrate educational technologies into their curriculum, one of the reasons may be the absence of skills and knowledge. Many faculty are simply uninformed of the ways in which new technologies may support their curricula and teaching strategies. Among those who are aware of new uses of technology , many are inhibited by their self-perceived lack of skill with the technology. Others are simply technologically illiterate.

Solution. The solution to this sort of deficiency is **orientation and training**. Faculty must be made aware of how new technologies may enhance the learning experience for their students, and they must also be trained in using the accompanying equipment.

Absence of Incentive or Improper Incentive

Cause. The absence of incentive, or improper incentive, are both causes for gaps between *actuals* and *optimals*. Like all employees, faculty need to feel that the consequences of their time and energy matters. Based upon the fact that most faculty place a high value on educational technology, the question shifts to why don't they use it more. One reason for some is the lack of incentive. Another reason is that the incentives they do receive are undesirable.

Solution. Faculty will no doubt need to see first-hand the successes of integrating educational technology into their curriculum; that's incentive. Another incentive is feedback and appraisals on their use of educational technology. Perhaps faculty should be given release time to develop course materials in conjunction with the Media Center, or be told that creative instructional methods, like integrating technology, will be positive consideration for tenure. The problem with some incentives is that they work against the user. For example, if a faculty member is successful at producing instructional materials, does s/he then become the designated materials producer for the department? This kind of incentive can work against progress. An incentive-based solution sometimes requires a **policy change.**

Absence of Environmental Support

Cause. Demands for faculty's time and energy leave little extra, if any, for pursuing more creative endeavors, such as learning how to integrate new technologies into their curricula. Other environmental blocks include the absence of proper procedures, facilities, and equipment. A less-often considered block is the psychological climate of the institution.

Solution. To promote **environmental support** for educational technology on campus, the Media Center must reevaluate its procedures to reduce bureaucracy as much as possible and to make faculty feel like the experience is not burdensome. The facilities and equipment maintained by the Media Center must be user oriented and accessible. And, the various administrators in each users' department must be supportive of faculty's changes in instructional methods.

Absence of Motivation

Cause. Another reason faculty may avoid integrating new technology into their curricula is the lack of motivation. Many faculty have done well over the years teaching without technology, and this is ample reason to question why they should change their current practice. One does not have do be a technophobe to have little use for technology, especially if it appears that achievement of current objectives occurs without a hitch. But a problem may arise if suddenly, students have needs for a different kind of learning.

Solution. Two factors may account for motivation: *value* and *confidence*. First, faculty need to perceive a *value* for increasing their use of educational technology. The needs assessment reports that this is now occurring. Faculty must also be confident in the use of technology. The needs assessment reveals that faculty are both hesitant to increase their *planned use* of technology and are hesitant to start using *new media*. One possible explanation is that faculty do not feel confident in using the valued technology. Raising their **expectancy of success** is one solution to raising confidence, hence motivation.

Interpretation Summary

Faculty who responded to the questionnaire are hesitant to engage their students in increased levels of educational technology use due to several factors, some of which are identified above. Albright and Graf (1992, p. 7) sum it up this way:

> "Why has technology not had a greater impact on college teaching? The reasons have been variously identified as conservative institutional structures which inhibit change, faculty commitment to traditional teaching methods, a reward system that does not recognize efforts to improve teaching, and overt fear of technology (McNeil, 1988); the lack of recognition of technology by administrators and faculty as an integral part of the curriculum and undergraduate experience (Green, 1991); insufficient financial resources that enable colleges and universities to invest in technology; the rapid pace of technological change, the complexity of some technology-based instructional systems, disproportionate access to technology from one academic unit to another, the shortage of high-quality software, the time required for faculty to learn to use technology and develop needed materials, the lack of training for faculty, and the absence of adequate campus support services (Lewis and Wall, 1988).

Some broadly defined solutions to this problem are a) faculty orientation and training (in the use of new technologies), b) policy changes in faculty's own department to promote increased use, c) environmental support for easier and more efficient use, and d) collaborative endeavors with Media Center personnel to increase faculty's expectancy for success in using instructional technology. Of course, funding levels determine the extent to which the Media Center can broaden its networking strategy with campus academic departments and offer additional support services for helping faculty to integrate technologies into their curricula. For example, to promote increased use of multimedia at this time may result in a shortage of CD-Rom players and available software. Likewise, it makes little sense to promote a greater use of distance education if the Media Center could not handle the increase workload of teleconferences and teleclasses. An important responsibility of the Media Center is to monitor planned use of educational technology on campus. Judging from the gap between planned use and the high value that faculty place on educational technologies, we can expect future use patterns to rise accordingly.

Conclusion

Faculty do not need educational technology in order to teach, and many will refuse to integrate new technologies in the classroom up to the very end. Some excellent "chalk and talk" teachers will manage fine in this mindset. There are good reasons to approach technological adoption and implementation with some skepticism; however, there are also good reasons to keep pace with advancements in the field.

Gentry & Csete (1991) make several predictions about the changing and expanding needs for educational technology in education in the 1990s. Some of those predictions are paraphrased below:

a) A growing diversity of the student population will include more older, disabled, part-time, minority, and commuter students. This will increase need for distance education and specialized technologies for accommodating individual differences.

b) Pressure from business, industry and government to better prepare technology-literate graduates for information service type positions will increase.

c) Supplemental technology-based instruction and training will be needed by former graduates to overcome job obsolescence in the workplace.

d) More useful and sophisticated, yet more *user friendly*, man-machine interfaces will cause more educators to become adopters of educational technology.

e) A more technology-literate student body, along with their increased need for independent learning skills, will cause students to pressure faculty to adopt technological approaches.

The role of media centers in keeping up with these demands will also change. For example, Albright (1992) predicts several trends that will change the roles of media centers in the 1990s. These include consultative services (about technology integration), greater use of technology by faculty, multimedia classrooms, increased responsibility for the classroom physical environment, multimedia consultation and production services, greater distance education support, more instructional development services, and so forth.

We are currently in an information explosion, and each day brings new and exciting developments in every field of endeavor. Access to great amounts of information on a timely basis requires that we use technology in order to deal effectively with current issues and

discoveries. And while some fields of study may be more exciting than others, new presentation software and equipment can deliver increasingly effective ways of dealing with any subject matter. Imagine discussing an historical figure in class, when instantaneously the professor decides to alter the course of instruction to play a video clip of Martin Luther King's "I had a dream" speech, or to hear a Mozart sonata, or to project a score onto a large screen at front of the room, or even access a CD-Rom database with maps and geographic data for every country in the world. Those are hard technologies that can virtually transform the classroom cubicle into a room with a view of the world. But educational technology is more than just hardware; it is the systems, media, processes, and services that support instruction and learning. Consider too the soft technologies. Educational technology subsumes the field of instructional technology, which is the analysis, design and development, and evaluation of instruction and learning in any form. Sometimes a simple re-working of teaching, learning, or assessment strategies are what's needed to reinvigorate a learning environment, whether or not it even includes any products, equipment, or facilities.

Current research shows that there will be a demand from society—students, parents, legislatures, governing boards, potential employers, and the general public—that educational institutions produce graduates who can function in a highly technical information-based economy (Albright & Graf, 1992, Gentry & Csete, 1991; Ely, 1991). There will also become an increased quality gap in favor of institutions or departments who adopt educational technology compared to those who allow obstacles (or excuses) to prevail. The role of the media center on campus is to support those faculty and administrators who buy into the trend.

Twenty years ago, the term educational technology was closely associated with audio-visual equipment and materials packets. These were the tools to supplement *teaching*. Today, the term is widely becoming more accepted for it's functional uses, rather than it's inventory. Educational technology today is functional support for enhancing the *learning* experience of students.

References

AECT Task Force (1977). *Educational technology: Definition and glossary of terms.* Washington, DC: Association for Educational Communications and Technology.

Albright, M. J. (1989). It's Time to rethink instructional technology services in higher education, *Tech Trends, 34* (5), 40-45.

Albright, M. J. (1992). The future of campus Media Centers. In M. J. Albright, *New directions for teaching and learning, No. 51 (Teaching in the information age: The role of educational technology)*, Jossey-Bass: San Francisco (pp. 91-100)

Albright, M. J., & Graf, D. L. (1992). Instructional technology and the faculty member. In M. J. Albright, *New directions for teaching and learning, No. 51 (Teaching in the information age: The role of educational technology)*, Jossey-Bass: San Francisco (pp. 7-15)

Ely, D. P. (1991). Trends and issues in educational technology, 1989. In G. J. Anglin (ed), *Instructional Technology: Past, Present, and Future.* Englewood, CO: Libraries Unlimited, Inc. (pp. 34-58)

Green, K. C. (1991). A technology agenda for the 1990s. *Change*, 23 (1), 6-7.

Gentry, C. G. & Csete, J. (1991). Educational technology in the 1990s. In G. J. Anglin (ed), *Instructional Technology: Past, Present, and Future.* Englewood, CO: Libraries Unlimited, Inc. (pp. 20-33).

Hammond, N., Gardner, N., Heath, S., Kibby, M., Mayes, T., McAleese, R., Mullings, C. & Trapp, A. (1992). Blocks to the effective use of information technology in higher education. *Computers in Education, 18* (1-3), 155-162.

Jaeger, R. M. (1988). "Section VI: Survey Methods in Educational Research," in R. M. Jaeger (Ed.), *Complementary Methods for Research in Education..* American Educational Research Association: Washington, DC (pp. 301-388)

Kaufman, R. (1982). *Identifying and solving problems: A systems approach.* San Diego: University Associates.

Kaufman, R., Stakenas, R. G., Wager, J. C., & Mayer, H. (1981). Relating needs assessment, program development, implementation, and evaluation, *Journal of Instructional Development*, 4(4), 17-26.

Lewis, R. J., & Wall, M. (1988). *Exploring obstacles to uses of technology in higher education: A discussion paper.* Washington, DC: Academy for Educational Development.

McNeil, D. R. (1985). *Status of technology in higher education: A reassessment.* Washington DC: Academy for Educational Development. (ERIC Document Reproduction Service No. ED 307 860)

Rossett, A. (1987).*Training Needs Assessment.* Englewood Cliffs, NJ: Educational Technology Publications.

Rossett, A. (1991). Needs Assessment. In G. J. Anglin (ed), *Instructional Technology: Past, Present, and Future.* Englewood, CO: Libraries Unlimited, Inc. (pp. 156-169).

Rothwell, W. J. & Kazanas, H. C. (1992). *Mastering the instructional design process: A systematic approach.* Jossey-Bass: San Francisco.

Saettler, P. (1968). *A history of instructional technology.* New York: McGraw-Hill Book Company.

Saettler, P. (1990). *The evolution of American educational technology.* Englewood, CO: Libraries Unlimited.

Appendices

Table of Contents

Contents	Appendices page
Faculty Questionnaire Cover Letter	2
Faculty Questionnaire, Page 1	3
Faculty Questionnaire, Page 2	4
Mail And Response Information	5
First Question: "I Use Media Services"	6
Section A: Media Center Services, Item Data	7-21
Section B: Quality Of Media Center Services, Item Data	22-24
Section C: I Plan To Use Media Center Services, Item Data	25-39
Section D: Use of Various Equipment, Item Data	40
Comments: Section E & Extraneous Notes	41-51
ALL Results: Sections A & C with Item Labels	52
UCD Results: Sections A & C with Item Labels	53
MSCD Results: Sections A & C with Item Labels	54
CCD Results: Sections A & C with Item Labels	55
ALL Results: Section D with Item Labels	56
UCD Results: Section D with Item Labels	57
MSCD Results: Section D with Item Labels	58
CCD Results: Section D with Item Labels	59
ALL Results: Sections A & C Comparison Graph	60
UCD Results: Sections A & C Comparison Graph	61
MSCD Results: Sections A & C Comparison Graph	62
CCD Results: Sections A & C Comparison Graph	63
ALL Results: Section D Comparison Graph	64
Summary of Assessment Process	65-66
AMC Staff Feedback Memo	67
Question List for AMC Staff	68
Summary of AMC Staff Input to Process	69-71

Auraria
Media Center

TO: Faculty Members

FROM: Muriel Woods
Director, Auraria Media Center

SUBJECT: Faculty Survey

DATE: April 18, 1994

The Media Center staff has been working to improve a number of services for campus faculty. For example, because we recognized the difficulty that lack of equipment delivery to the classroom has caused faculty, a major emphasis has been placed on implementing the Classroom Equipment Plan, which will permanently place pieces of equipment in selected classrooms. Other services have also been developed, such as computer produced graphics for slides, transparencies and video.

As we plan for Fall Semester and beyond we want to improve and develop services in ways most useful to the faculty and would, therefore, appreciate your assistance. The attached survey will enable us to know both which services you feel are important and which ones you personally expect to use. It will take only a few minutes to complete and the results will be used in our planning process. Please check or circle the appropriate responses in each section, fold and staple/tape the survey, and return it to the Media Center; the return address is printed on the back of the second page.

Because we want and appreciate your input, each faculty member who returns the survey will receive one of the following to support your teaching; a set of 5 color transparencies with graphics designed based on your instructions, a blank VHS video tape, a set of transparency markers or a box of computer disks; there will also be a drawing for one rental film up to $ 100 in value provided without cost. To receive your teaching item, remove this cover memo, complete the registration page and the survey. Please return your completed survey and registration separately by **May 6, 1994.**

FcSrvyCv.r

Faculty Service Questionnaire
Auraria Media Center
April 18, 1994

Please circle one number for each item that best describes your response to the statements below:

	Almost Always	—	Occasionally	—	Almost Never
1. I use Media Center services	5	4	3	2	1

If "Almost Never," were you aware that media services are available? YES NO

A. Media Center Services: How important are these services for higher education?	Very Important	—	Moderately Important	—	Very Unimporta
1. Checking out media equipment	5	4	3	2	1
2. Analysis, design, and/or evaluation of instructional media	5	4	3	2	1
3. Design and development of computer-assisted instruction	5	4	3	2	1
4. Design and production of instructional materials (graphics, video, overhead transparencies, computer-based instruction)	5	4	3	2	1
5. Distance education consultation and production	5	4	3	2	1
6. Equipment consultation and systems design	5	4	3	2	1
7. Film and video checkout and/or rental	5	4	3	2	1
8. Installation of media/data presentation equipment in selected classrooms	5	4	3	2	1
9. Maintenance and repair of equipment	5	4	3	2	1
10. Making copies of existing media (audio or video cassettes)	5	4	3	2	1
11. Multimedia (CD-ROM) authoring and mastering	5	4	3	2	1
12. Recording off-air and satellite transmitted video programs	5	4	3	2	1
13. Sending and/or receiving interactive teleconferences	5	4	3	2	1
14. Video or fiber optic delivery systems	5	4	3	2	1
15. other (*please specify*):	5	4	3	2	1

B. Quality of Media Center services:	Strongly Agree	—	Agree	—	Strongly Disagree
1. Personnel I've come in contact with are always courteous and eager to help	5	4	3	2	1
2. Services are of high quality	5	4	3	2	1
3. other (*please specify*):	5	4	3	2	1

C. I plan to use these Media Center services:	Almost Always	—	Often	—	Almost Never
1. Checking out media equipment	5	4	3	2	1
2. Analysis, design, and/or evaluation of instructional media	5	4	3	2	1
3. Design and development of computer-assisted instruction	5	4	3	2	1
4. Design and production of instructional materials (graphics, video, overhead transparencies, computer-based instruction)	5	4	3	2	1
5. Distance education consultation and production	5	4	3	2	1
6. Equipment consultation and systems design	5	4	3	2	1
7. Film and video checkout and/or rental	5	4	3	2	1
8. Installation of media/data presentation equipment in selected classrooms	5	4	3	2	1
9. Maintenance and repair of equipment	5	4	3	2	1
10. Making copies of existing media (audio or video cassettes)	5	4	3	2	1
11. Multimedia (CD-ROM) authoring and mastering	5	4	3	2	1
12. Recording off-air and satellite transmitted video programs	5	4	3	2	1
13. Sending and/or receiving interactive teleconferences	5	4	3	2	1
14. Video or fiber optic delivery systems	5	4	3	2	1
15. other (*please specify*):	5	4	3	2	1

D. Please circle the appropriate number indicating how you might use various equipment:

Item	I use	I would use	I don't need	Item	I use	I would use	I don't need
1. Overhead projector	3	2	1	8. Opaque projector	3	2	1
2. Slide projector	3	2	1	9. CD-ROM equipment	3	2	1
3. Movie projector	3	2	1	10. Video camcorder	3	2	1
4. TV receiver/monitor	3	2	1	11. CD player (audio)	3	2	1
5. Campus-wide TV distribution system	3	2	1	12. Audio cassette recorder/player	3	2	1
6. Video/data projector or video/data monitor	3	2	1	13. LCD panel (computer screen projector)	3	2	1
7. VCR (Video cassette recorder/player)	3	2	1	14. CD-I (interactive CD equipment)	3	2	1

E. Things we need:	Greatly Needed	—	Needed	—	... to consider
Please list other media-related things your department may need:					
1. (*specify*):	5	4	3	2	1
2. (*specify*):	5	4	3	2	1
3. (*specify*):	5	4	3	2	1

Please return this questionnaire by May 6 to Joseph P. Martinez, Campus Box 101.

Faculty Service Questionnaire
Mail and Response Information

Canvas Mailing

Institution:	Count:	Percent:
UCD	845	40%
MSCD	925	44%
CCD	325	16%
TOTAL	2,095	100%

Responses

Institution:	Count:	Percent:
UCD	109	39%
MSCD	134	48%
CCD	37	13%
TOTAL	280	100%

Return Rate

Institution:	Percent:
UCD	13%
MSCD	15%
CCD	12%
TOTAL	13%

Registration Returns

Institution:	Count:
UCD	101
MSCD	131
CCD	37
TOTAL	269

Disqualified Returns Not Included

Institution:	Count:
UCD	2 (blanks)
MSCD	4 (blanks) 1 (back page only) 1 (very late)
CCD	1 (very late)
TOTAL	9

1. I use Media Center services

	Almost Always 5	Often 4	Occassionally 3	Seldom 2	Almost Never 1
All Count:	36	49	68	20	32
All %	18	24	33	10	16
UCD Count	11	15	40	6	11
UCD %	13	18	48	7	13
MSCD Count	20	29	22	10	15
MSCD %	21	30	23	10	16
CCD Count	5	5	6	4	6
CCD %	19	19	23	15	23

	Mean	SD	Count	Missing	Median	Mode
All	3.18	1.28	205	75	3	3
UCD	3.11	1.15	83	26	3	3
MSCD	3.30	1.34	96	38	4	4
CCD	2.96	1.46	26	11	3	•

Follow-up Question:

"If "Almost Never," were you aware that media services are available.?

- Only three (3) respondents answered "NO" to the follow-up question.
- Twenty five (25) who circled "1" on the scale answered "Yes"; three (3) left it blank
- One (1) respondent answered "YES + NO"

SECTION A. Media Center Services:
How important are these services for higher education?

1. Checking out media equipment

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	204	46	16	7	1
All %	74	17	6	3	4E-1
UCD Count	90	13	4	0	0
UCD %	70	19	6	5	0
MSCD Count	91	25	8	6	0
MSCD %	70	19	6	5	0
CCD Count	23	8	4	1	1
CCD %	62	22	11	3	3

	Mean	SD	Count	Missing	Median	Mode
All	4.62	.74	274	6	5	4
UCD	4.80	1.07	107	2	5	4
MSCD	4.55	.81	130	4	5	4
CCD	4.38	.98	37	0	5	4

SECTION A. Media Center Services:
How important are these services for higher education?

2. Analysis, design, and/or evaluation of instructional media

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	52	68	82	38	23
All %	20	26	31	14	9
UCD Count	14	23	36	18	10
UCD %	14	23	36	18	10
MSCD Count	29	36	36	16	10
MSCD %	23	28	28	13	8
CCD Count	9	9	10	4	3
CCD %	26	26	29	11	9

	Mean	SD	Count	Missing	Median	Mode
All	3.33	1.20	263	17	3	3
UCD	3.13	1.16	101	8	3	3
MSCD	3.46	1.20	127	7	4	•
CCD	3.49	1.25	35	2	4	3

SECTION A. Media Center Services:
How important are these services for higher education?

3. Design and development of computer-assisted instruction

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	52	67	80	40	22
All %	20	26	31	15	8
UCD Count	20	24	32	16	8
UCD %	20	24	32	16	8
MSCD Count	23	33	40	20	11
MSCD %	18	26	31	16	9
CCD Count	9	10	8	4	3
CCD %	26	29	24	12	9

	Mean	SD	Count	Missing	Median	Mode
All	3.33	1.20	261	19	3	3
UCD	3.32	1.20	100	9	3	3
MSCD	3.29	1.19	127	7	3	3
CCD	3.53	1.26	34	3	4	4

SECTION A. Media Center Services:
How important are these services for higher education?

4. Design and production of instructional materials (graphics, video, overhead transparencies, computer-based instruction)

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	84	76	66	28	13
All %	31	28	25	10	5
UCD Count	33	26	27	14	3
UCD %	32	25	26	14	3
MSCD Count	39	40	31	12	7
MSCD %	30	31	24	9	5
CCD Count	12	10	8	2	3
CCD %	34	29	23	6	9

	Mean	SD	Count	Missing	Median	Mode
All	3.71	1.16	267	13	4	4
UCD	3.70	1.14	103	6	4	3
MSCD	3.71	1.15	129	5	4	4
CCD	3.74	1.24	35	2	4	4

SECTION A. Media Center Services:
How important are these services for higher education?

5. Distance education consultation and production

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	38	52	75	54	32
All %	15	21	30	22	13
UCD Count	20	16	28	19	12
UCD %	21	17	29	20	13
MSCD Count	16	27	37	27	17
MSCD %	13	22	30	22	14
CCD Count	2	9	10	8	3
CCD %	6	28	31	25	9

	Mean	SD	Count	Missing	Median	Mode
All	3.04	1.24	251	29	3	3
UCD	3.14	1.31	95	14	3	3
MSCD	2.98	1.23	124	10	3	3
CCD	2.97	1.09	32	5	3	3

SECTION A. Media Center Services:
How important are these services for higher education?

6. Equipment consultation and systems design

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	40	67	73	52	22
All %	16	26	29	20	9
UCD Count	16	25	25	21	9
UCD %	17	26	26	22	9
MSCD Count	20	30	39	25	11
MSCD %	16	24	31	20	9
CCD Count	4	12	9	6	2
CCD %	12	36	27	18	6

	Mean	SD	Count	Missing	Median	Mode
All	3.20	1.19	254	26	3	3
UCD	3.19	1.23	96	13	3	•
MSCD	3.18	1.19	125	9	3	3
CCD	3.30	1.10	33	4	3	4

SECTION A. Media Center Services:
How important are these services for higher education?

7. Film and video checkout and/or rental

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	170	58	28	8	6
All %	63	21	10	3	2
UCD Count	65	24	9	6	1
UCD %	62	23	9	6	1
MSCD Count	86	23	15	2	4
MSCD %	66	18	12	2	3
CCD Count	19	11	4	0	1
CCD %	54	31	11	0	3

	Mean	SD	Count	Missing	Median	Mode
All	4.40	.95	270	10	5	4
UCD	4.39	.94	105	4	5	4
MSCD	4.42	.97	130	4	5	4
CCD	4.34	.91	35	2	5	4

SECTION A. Media Center Services:
How important are these services for higher education?

8. Installation of media/data presentation equipment in selected classrooms

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	172	53	29	6	7
All %	64	20	11	2	3
UCD Count	64	20	14	4	1
UCD %	62	19	14	4	1
MSCD Count	88	26	11	1	3
MSCD %	68	20	9	8E-1	2
CCD Count	20	7	4	1	3
CCD %	57	20	11	3	9

	Mean	SD	Count	Missing	Median	Mode
All	4.41	.96	267	13	5	4
UCD	4.38	.93	103	6	5	4
MSCD	4.51	.87	129	5	5	4
CCD	4.14	1.26	35	2	5	4

SECTION A. Media Center Services:
How important are these services for higher education?

9. Maintenance and repair of equipment

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	218	34	14	4	4
All %	80	12	5	1	1
UCD Count	85	13	6	1	2
UCD %	79	12	6	9E-1	2
MSCD Count	103	18	5	3	1
MSCD %	79	14	4	2	8E-1
CCD Count	30	3	3	0	1
CCD %	81	8	8	0	3

	Mean	SD	Count	Missing	Median	Mode
All	4.67	.77	274	6	5	4
UCD	4.66	.79	107	2	5	4
MSCD	4.68	.73	130	4	5	4
CCD	4.65	.86	37	0	5	•

SECTION A. Media Center Services:
How important are these services for higher education?

10. Making copies of existing media (audio or video cassettes)

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	71	87	62	32	11
All %	27	33	24	12	4
UCD Count	26	31	25	15	5
UCD %	25	30	25	15	5
MSCD Count	34	44	30	14	4
MSCD %	27	35	24	11	3
CCD Count	11	12	7	3	2
CCD %	31	34	20	9	6

	Mean	SD	Count	Missing	Median	Mode
All	3.67	1.12	263	17	4	4
UCD	3.57	1.16	102	7	4	4
MSCD	3.71	1.08	126	8	4	4
CCD	3.77	1.17	35	2	4	4

SECTION A. Media Center Services:
How important are these services for higher education?

11. Multimedia (CD-ROM) authoring and mastering

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	46	70	66	49	25
All %	18	27	26	19	10
UCD Count	20	27	19	18	13
UCD %	21	28	20	19	13
MSCD Count	19	33	39	24	10
MSCD %	15	26	31	19	8
CCD Count	7	10	8	7	2
CCD %	21	29	24	21	6

	Mean	SD	Count	Missing	Median	Mode
All	3.25	1.23	256	24	3	4
UCD	3.24	1.34	97	12	3	4
MSCD	3.22	1.16	125	9	3	3
CCD	3.38	1.21	34	3	3.5	4

SECTION A. Media Center Services:
How important are these services for higher education?

12. Recording off-air and satellite transmitted video programs

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	55	71	72	42	23
All %	21	27	27	16	9
UCD Count	20	23	29	20	7
UCD %	20	23	29	20	7
MSCD Count	27	38	32	18	14
MSCD %	21	29	25	14	11
CCD Count	8	10	11	4	2
CCD %	23	29	31	11	6

	Mean	SD	Count	Missing	Median	Mode
All	3.35	1.22	263	17	3	3
UCD	3.29	1.21	99	10	3	3
MSCD	3.36	1.26	129	5	4	4
CCD	3.51	1.15	35	2	4	3

SECTION A. Media Center Services:
How important are these services for higher education?

13. Sending and/or receiving interactive teleconferences

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	42	65	67	53	33
All %	16	25	26	20	13
UCD Count	17	22	25	25	11
UCD %	17	22	25	25	11
MSCD Count	20	32	31	24	19
MSCD %	16	25	25	19	15
CCD Count	5	11	11	4	3
CCD %	15	32	32	12	9

	Mean	SD	Count	Missing	Median	Mode
All	3.12	1.27	260	20	3	3
UCD	3.09	1.26	100	9	3	•
MSCD	3.08	1.30	126	8	3	4
CCD	3.32	1.15	34	3	3	•

SECTION A. Media Center Services:
How important are these services for higher education?

14. Video or fiber optic delivery systems

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	50	63	73	40	25
All %	20	25	29	16	10
UCD Count	24	20	22	21	10
UCD %	25	21	23	22	10
MSCD Count	21	35	37	15	12
MSCD %	18	29	31	12	10
CCD Count	5	8	14	4	3
CCD %	15	24	41	12	9

	Mean	SD	Count	Missing	Median	Mode
All	3.29	1.24	251	29	3	3
UCD	3.28	1.33	97	12	3	3
MSCD	3.32	1.20	120	14	3	3
CCD	3.24	1.13	34	3	3	3

SECTION A. Media Center Services:
How important are these services for higher education?

15. other (*please specify*):

	Very Important 5	Important 4	Moderately Important 3	Unimportant 2	Very Unimportant 1
All Count	12	0	3	2	5
All %	55	0	14	9	23
UCD Count	5	0	2	1	2
UCD %	50	0	20	10	20
MSCD Count	7	0	1	1	2
MSCD %	64	0	9	9	18
CCD Count	0	0	0	0	1
CCD %	0	0	0	0	100

	Mean	SD	Count	Missing	Median	Mode
All	3.55	1.74	22	258	5	1
UCD	3.50	1.72	10	99	4	•
MSCD	3.82	1.72	11	123	5	1
CCD	1.00	•	1	36	1	1

SECTION B. Quality of Media Center services:

1. Personnel I've come in contact with are always courteous and eager to help

	Strongly Agree 5	4	Agree 3	2	Strongly Disagree 1
All Count	114	92	50	11	3
All %	42	34	19	4	1
UCD Count	45	37	19	3	2
UCD %	42	35	18	3	2
MSCD Count	60	43	19	5	0
MSCD %	47	34	15	4	0
CCD Count	9	12	12	3	1
CCD %	24	32	32	8	3

	Mean	SD	Count	Missing	Median	Mode
All	4.12	.93	270	10	4	4
UCD	4.13	.94	106	3	4	4
MSCD	4.24	.85	127	7	4	4
CCD	3.68	1.03	37	0	4	•

SECTION B. Quality of Media Center services:

2. Services are of high quality

	Strongly Agree 5	4	Agree 3	2	Strongly Disagree 1
All Count	79	97	68	17	6
All %	30	36	25	6	2
UCD Count	35	37	23	6	3
UCD %	34	36	22	6	3
MSCD Count	37	48	32	8	2
MSCD %	29	38	25	6	2
CCD Count	7	12	13	3	1
CCD %	19	33	36	8	3

	Mean	SD	Count	Missing	Median	Mode
All	3.85	.99	267	13	4	4
UCD	3.91	1.03	104	5	4	4
MSCD	3.87	.96	127	7	4	4
CCD	3.58	1.00	36	1	4	3

SECTION B. Quality of Media Center services:

3. other (*please specify*):

	Strongly Agree 5	4	Agree 3	2	Strongly Disagree 1
All Count	8	2	0	1	4
All %	53	13	0	7	27
UCD Count	5	0	0	0	1
UCD %	83	0	0	0	17
MSCD Count	3	2	0	0	3
MSCD %	38	25	0	0	38
CCD Count	0	0	0	1	0
CCD %	00	0	0	100	0

	Mean	SD	Count	Missing	Median	Mode
All	3.60	1.80	15	265	5	1
UCD	4.33	1.63	6	103	5	1
MSCD	3.25	1.91	8	126	4	1
CCD	2.00	.	1	36	2	2

SECTION C. I plan to use these Media Center services:

1. Checking out media equipment

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	132	43	44	37	14
All %	49	16	16	14	5
UCD Count	48	17	20	13	5
UCD %	47	17	19	13	5
MSCD Count	70	22	18	17	6
MSCD %	53	17	14	13	5
CCD Count	14	4	6	7	3
CCD %	41	12	18	21	9

	Mean	SD	Count	Missing	Median	Mode
All	3.90	1.29	270	10	4	3
UCD	3.87	1.27	103	6	4	3
MSCD	4.00	1.26	133	1	5	4
CCD	3.56	1.44	34	3	4	2

SECTION C. I plan to use these Media Center services:

2. Analysis, design, and/or evaluation of instructional media

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	13	26	42	93	83
All %	5	10	16	36	32
UCD Count	3	9	13	37	36
UCD %	3	9	13	38	37
MSCD Count	7	14	23	41	40
MSCD %	6	11	18	33	32
CCD Count	3	3	6	15	7
CCD %	9	9	18	44	21

	Mean	SD	Count	Missing	Median	Mode
All	2.19	1.15	257	23	2	2
UCD	2.04	1.07	98	11	2	2
MSCD	2.26	1.18	125	9	2	2
CCD	2.41	1.18	34	3	2	2

SECTION C. I plan to use these Media Center services:

3. Design and development of computer-assisted instruction

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	13	22	31	93	98
All %	5	9	12	36	38
UCD Count	3	11	10	33	41
UCD %	3	11	10	34	42
MSCD Count	6	9	18	44	49
MSCD %	5	7	14	35	39
CCD Count	4	2	3	16	8
CCD %	12	6	9	48	24

	Mean	SD	Count	Missing	Median	Mode
All	2.06	1.14	257	23	2	1
UCD	2.00	1.12	98	11	2	1
MSCD	2.04	1.12	126	8	2	1
CCD	2.33	1.27	33	4	2	2

SECTION C. I plan to use these Media Center services:

4. Design and production of instructional materials (graphics, video, overhead transparencies, computer-based instruction)

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	26	42	52	89	52
All %	10	16	20	34	20
UCD Count	9	16	20	30	25
UCD %	9	16	20	30	25
MSCD Count	12	23	25	47	20
MSCD %	9	18	20	37	16
CCD Count	5	3	7	12	7
CCD %	15	9	21	35	21

	Mean	SD	Count	Missing	Median	Mode
All	2.62	1.25	261	19	2	2
UCD	2.54	1.27	100	9	2	2
MSCD	2.69	1.21	127	7	2	2
CCD	2.62	1.33	34	3	2	2

SECTION C. I plan to use these Media Center services:

5. Distance education consultation and production

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	5	16	33	78	117
All %	2	6	13	31	47
UCD Count	3	8	13	29	42
UCD %	3	8	14	31	44
MSCD Count	2	7	16	36	61
MSCD %	2	6	13	30	50
CCD Count	0	1	4	13	14
CCD %	0	3	12	41	44

	Mean	SD	Count	Missing	Median	Mode
All	1.85	1.01	249	31	2	1
UCD	1.96	1.10	95	14	2	1
MSCD	1.80	.99	122	12	1.5	1
CCD	1.75	.80	32	5	2	1

SECTION C. I plan to use these Media Center services:

6. Equipment consultation and systems design

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	12	19	39	75	107
All %	5	8	15	30	42
UCD Count	5	7	13	23	47
UCD %	5	7	14	24	49
MSCD Count	6	9	20	40	49
MSCD %	5	7	16	32	40
CCD Count	1	3	6	12	11
CCD %	3	9	18	36	33

	Mean	SD	Count	Missing	Median	Mode
All	2.02	1.15	252	28	2	1
UCD	1.95	1.19	95	14	2	1
MSCD	2.06	1.14	124	10	2	1
CCD	2.12	1.08	33	4	2	2

SECTION C. I plan to use these Media Center services:

7. Film and video checkout and/or rental

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	113	49	43	42	21
All %	42	18	16	16	8
UCD Count	38	18	21	15	10
UCD %	37	18	21	15	10
MSCD Count	61	26	19	18	8
MSCD %	46	20	14	14	6
CCD Count	14	5	3	9	3
CCD %	41	15	9	26	9

	Mean	SD	Count	Missing	Median	Mode
All	3.71	1.36	268	12	4	4
UCD	3.58	1.37	102	7	4	3
MSCD	3.86	1.30	132	2	4	4
CCD	3.53	1.48	34	3	4	2

SECTION C. I plan to use these Media Center services:

8. Installation of media/data presentation equipment in selected classrooms

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	87	48	43	34	41
All %	34	19	17	13	16
UCD Count	29	20	17	13	14
UCD %	31	22	18	14	15
MSCD Count	49	24	18	18	18
MSCD %	39	19	14	14	14
CCD Count	9	4	8	3	9
CCD %	27	12	24	9	27

	Mean	SD	Count	Missing	Median	Mode
All	3.42	1.48	253	27	4	4
UCD	3.40	1.44	93	16	4	4
MSCD	3.54	1.47	127	7	4	4
CCD	3.03	1.57	33	4	3	1

SECTION C. I plan to use these Media Center services:

9. Maintenance and repair of equipment

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	109	27	36	31	41
All %	45	11	15	13	17
UCD Count	38	12	13	9	16
UCD %	43	14	15	10	18
MSCD Count	62	14	13	16	19
MSCD %	50	11	10	13	15
CCD Count	9	1	10	6	6
CCD %	28	3	31	19	19

	Mean	SD	Count	Missing	Median	Mode
All	3.54	1.55	244	36	4	1
UCD	3.53	1.56	88	21	4	1
MSCD	3.68	1.55	124	10	4.5	1
CCD	3.03	1.47	32	5	3	3

SECTION C. I plan to use these Media Center services:

10. Making copies of existing media (audio or video cassettes)

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	44	38	47	70	59
All %	17	15	18	27	23
UCD Count	16	16	16	24	27
UCD %	16	16	16	24	27
MSCD Count	24	18	23	35	25
MSCD %	19	14	18	28	20
CCD Count	4	4	8	11	7
CCD %	12	12	24	32	21

	Mean	SD	Count	Missing	Median	Mode
All	2.76	1.40	258	22	2.5	2
UCD	2.70	1.44	99	10	2	1
MSCD	2.85	1.41	125	9	3	2
CCD	2.62	1.28	34	3	2	2

SECTION C. I plan to use these Media Center services:

11. Multimedia (CD-ROM) authoring and mastering

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	21	20	39	57	112
All %	8	8	16	23	45
UCD Count	9	8	14	18	46
UCD %	9	8	15	19	48
MSCD Count	9	11	18	31	53
MSCD %	7	9	15	25	43
CCD Count	3	1	7	8	13
CCD %	9	3	22	25	41

	Mean	SD	Count	Missing	Median	Mode
All	2.12	1.30	249	31	2	1
UCD	2.12	1.35	95	14	2	1
MSCD	2.11	1.27	122	12	2	1
CCD	2.16	1.27	32	5	2	1

SECTION C. I plan to use these Media Center services:

12. Recording off-air and satellite transmitted video programs

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	17	31	27	73	107
All %	7	12	11	29	42
UCD Count	5	12	9	26	45
UCD %	5	12	9	27	46
MSCD Count	8	15	16	37	49
MSCD %	6	12	13	30	39
CCD Count	4	4	2	10	13
CCD %	12	12	6	30	39

	Mean	SD	Count	Missing	Median	Mode
All	2.13	1.27	255	25	2	1
UCD	2.03	1.24	97	12	2	1
MSCD	2.17	1.25	125	9	2	1
CCD	2.27	1.42	33	4	2	1

SECTION C. I plan to use these Media Center services:

13. Sending and/or receiving interactive teleconferences

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	8	18	29	74	124
All %	3	7	11	29	49
UCD Count	3	6	8	34	45
UCD %	3	6	8	35	47
MSCD Count	4	8	16	29	68
MSCD %	3	6	13	23	54
CCD Count	1	4	5	11	11
CCD %	3	12	16	34	34

	Mean	SD	Count	Missing	Median	Mode
All	1.86	1.08	253	27	2	1
UCD	1.83	1.03	96	13	2	1
MSCD	1.81	1.09	125	9	1	1
CCD	2.16	1.14	32	5	2	.

SECTION C. I plan to use these Media Center services:

14. Video or fiber optic delivery systems

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	17	18	30	55	127
All %	7	7	12	22	51
UCD Count	6	8	9	21	48
UCD %	7	9	10	23	52
MSCD Count	9	10	15	25	64
MSCD %	7	8	12	20	52
CCD Count	2	0	6	9	15
CCD %	6	0	19	28	47

	Mean	SD	Count	Missing	Median	Mode
All	1.96	1.25	247	33	1	1
UCD	1.95	1.25	92	17	1	1
MSCD	1.98	1.28	123	11	1	1
CCD	1.91	1.12	32	5	2	1

SECTION C. I plan to use these Media Center services:

15. other (*please specify*):

	Almost Always 5	Very Often 4	Often 3	Seldom 2	Almost Never 1
All Count	4	1	2	4	16
All %	15	4	7	15	59
UCD Count	2	0	0	1	5
UCD %	25	0	0	12	62
MSCD Count	1	1	2	2	9
MSCD %	7	7	13	13	60
CCD Count	1	0	0	1	2
CCD %	25	0	0	25	50

	Mean	SD	Count	Missing	Median	Mode
All	2	1.49	27	253	1	1
UCD	2.12	1.81	8	101	1	2
MSCD	1.87	1.30	15	119	1	1
CCD	2.25	1.89	4	33	1.5	1

SECTION D.

Please circle the appropriate number indicating how you might use various equipment:

Item	I use (3)	I would use (2)	I don't need (1)
1. Overhead projector	**2.62**		
2. Slide projector		**2.04**	
3. Movie projector		**1.63**	
4. TV receiver/monitor	**2.59**		
5. Campus-wide TV distribution system		**1.88**	
6. Video/data projector or video/data monitor		**1.87**	
7. VCR (Video cassette Recorder/Player)	**2.62**		
8. Opaque projector			**1.43**
9. CD-ROM equipment		**1.62**	
10. Video camcorder		**1.79**	
11. CD player (audio)		**1.62**	
12. Audio cassette recorder/player		**1.86**	
13. LCD panel (computer screen projector)		**1.73**	
14. CD-I (interactive CD equipment)			**1.48**

Ranking:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
All	1	7	4	2	5	6	12	10	13	3	9	11	14	18
UCD	1	7	4	2	6	12	10	13	11	3	5	9	8	14
MSCD	4	7	1	5	2	12	6	10	13	3	9	11	14	8
CCD	1	7	4	10	6	13	5	2	9	14	12	11	3	8

Means:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
All	2.62	2.04	1.63	2.59	1.88	1.87	2.62	1.43	1.62	1.79	1.62	1.86	1.73	1.48
UCD	2.71	2.12	1.65	2.56	1.65	1.84	2.64	1.41	1.56	1.76	1.66	1.79	1.73	1.38
MSCD	2.60	2.06	1.66	2.71	2.08	1.91	2.68	1.43	1.64	1.76	1.61	1.98	1.70	1.51
CCD	2.40	1.76	1.53	2.22	1.79	1.81	2.38	1.53	1.71	1.95	1.55	1.65	1.81	1.66

COMMENTS: SECTION E. "Things we need"
Extraneous notes (open comments)

Case #: 1
E.1: (5) Updated VCR for our speechmaking laboratory ARTS 273
E.2: (4) Slide projector for WEST CLASSROOM 146
E.3: (4) Easel for charts for WEST CLASSROOM 146
Notes: B.3: Personnel are cheerful about last-minute requests.
"Thanks for doing this! We appreciate your interest."

Case #: 3
Notes: B.3: Is there a lot of turnover and training for new workers? Twice I have had either mis-communication or promising something that was not delivered.

Case #: 4
E.1: (5) TV's and VCR's
E.2: (5) laser disc player's
E.3: easier way to get film purchasing

Case #: 5
E.1: (5) portable overhead projector to take to conferences

Case #: 6
Notes: The overhead in SCIENCE 112 is so bad, it's virtually useless.

Case #: 9
Notes: B3: some of the screens are not in very good shape.

Case #: 11
E.1: (5) slides from print sources
E.2: (5) audio tapes from selected topics
E.3: videos of stage productions/lectures

Case #: 13
E.1: computer w/LCD available for instruction in NORTH CLASSROOM

Case #: 14
E.1: media equip. for 7 am classes

Case #: 16
E.1: (5) NCR
E.2: film rentals
Notes: A.15: access to equip. without going from building to building.
B.3: people really try to help.

Case #: 20
E.1: (4) cassette recorders avail. for students

Case #: 23
E.1: reliable TV equip. in specific rms.

Case #: 25
Notes: B.3: Larry Wood has been invaluable in my class. Always ready to help. He's gone above and beyond the call.

Case #: 26
E.1: multi system. video. record. & copy mach.
E.2: audio-cassette. player/rec. of better quality

Case #: 27
E.1: (5) close caption
Notes: A.15: close captions of videos & films for deaf students.

Case #: 30
E.1: In-service workshops on how multi-media can assist education in history.

Case #: 40
E.1: permanent classroom VCR's

Case #: 42
E.1: (3) more video tapes
Notes: B.2: Rolling equipment to and from classrooms is a big problem. Any possibility that it could be delivered & picked-up?

Case #: 45
Notes: C.8 & C.9: You do these things as needed, right?

Case #: 46
E.1: (5) CD-Rom
Notes: B.3: please update the video catalog.

Case #: 47
E.1: have media-center personnel set-up in classrooms, & take down equip.

Case #: 48
E.1: an updated video & film catalog
E.2: keep the above updated in a timely manner

Case #: 51
Notes: Joseph-I question using a survey to gauge importance of these. They may be great, but most of us aren't aware of the services available. Alan

Case #: 53
E.1: projection TV hook-up for computer display in the classroom

Case #: 55
Notes: B.1: all of personnel (Bev, Greg, David, Elaine, etc.) are extremely helpful. thank you.

Case #: 59
E.1: need a quick slide making system
Notes: B.3: The level of bureaucracy is high. It is sometimes difficult to find help.

Case #: 63
E.1: (5) computer in CD Rom in arts
E.2: (5) projector in SCIENCE 104

Case #: 66
E.1: (5) VCR systems in rooms for speeches

Case #: 67
E.1: 4. more VCR/monitors in each room 4

Case #: 69
E.1: library of videos on artists lives and museum shows or CD Rom presentations
Notes: I have found the media center extremely flexible & helpful. Thank you. May your budgets increase & may you do great things.

Case #: 71
E.1: replace audio equip. stolen from ARTS 186

Case #: 73
E.1: sound in the projection booth in NORTH CLASSROOM 1535
E.2: expansion of video tapes by media center.

Case #: 74
Notes: Media assistance very inconsistent. Just two days ago (4/26/94) I tried to help students with multi-media presentation in NORTH CLASSROOM 1535 at 11am. We had arranged for an uncomplicated arrangement of overhead remote control slide presentation and VCR tape. Media person in charge assured us in advance everything was hooked up and all we had to do was push a button. When it didn't work he appeared puzzled and slow to help.

Case #: 78
E.1: TV/VCR on 1st floor. in WEST CLASSROOM
Notes: B.3: need to provide portable equip. on 1st floor, WEST CLASSROOM.

Case #: 79
Notes: I would like to do more than I do now, and would be interested in exploring possibilities.

Case #: 81
Notes: I've had almost no contact with media center personnel.

Case #: 85
E.1: (3) more films on video

Case #: 86
E.2: scanning images
E.3: linotronic output
Notes: A.15: computer film (slides) recorder

Case #: 89
E.1: (4) projector for printed mats
E.2: smaller screens in classrooms
Notes: A.15: permanent installation of equip. in classrooms. Also: please remove heavy chains from overhead projectors.

Case #: 90
E.1: (5) more screening rooms for movies

Case #: 94
E.1: slides: history of Amer. art
Notes: A.15: slide library: architecture, illustrations.

Case #: 97
Notes: lots of difficulty getting media for preview via media dept. (& purchased)

Case #: 102
E.1: laser discs are being pushed book pubs.
Notes: A.15: making slides from books material-I can't get this done.

Case #: 103
E.1: learning tapes
E.2: video editing equip.
Notes: A.15: location/delivery of equip. to the classroom.

Case #: 107
E.1: I would like an in-depth information meeting on what the media center provides.

Case #: 108
E.1: (5) history videos
E.2: (5) sharp projectors

Case #: 112
E.1: more availability in SCIENCE & SOUTH CLASSROOM bldg. of VCR's, laser disc player's, etc.

Case #: 115
E.1: (1) another large video screen projector
E.2: (5) newer overhead in TRAMWAY BUILDING

Case #: 125
E.1: CD-Rom equip. for our A & P Macs
Notes: A.15: anything to support our educational goals.

Case #: 128
E.1: (4) sharp video projector

Case #: 129
Notes: B.3: it is frustrating to haul video-tape equip. long distances to classrooms in SOUTH & SCIENCE BUILDINGS.

Case #: 130
E.1: sharper image video projectors

Case #: 131
E.1: bigger TV screens in the larger classrooms (WEST CLASSROOM 261)

Case #: 132
E.1: we need a performance lab for speech more updated TV production equip. updated computerized radio lab

Case #: 135
E.1: (5) VCR

Case #: 140
E.1: VCR/monitors in classrooms in PHYSCIAL EDUCATION bldg.

Case #: 141
E.1: overheads in good repair
E.2: computer screen display in good repair
Notes: B.3: more lab assist. helpful.

Case #: 142
E.1: better audio tape players

Case #: 143
E.1: on-site VCR monitors/video
E.2: CD-Rom/video

Case #: 146
E.1: CD-Rom
E.2: LCD panel
E.3: video camcorder

Case #: 149
E.1: (5) tri-standard video player
E.2: video converter from European to US

Case #: 152
E.1: (5) laser disc players
E.2: (5) histology video or slide series

Case #: 155
E.1: (5) VCR/TV monitor

Case #: 158
E.1: everything listed above

Case #: 159
E.2: (5) computer produced graphics w/ slide development capabilities

Case #: 160
Notes: re; A.*. I would argue against permanent installation of equipment in selected classrooms unless equipment would not get in the way. I had an experience last year where a TV/VCR set chained to the lecture table in NORTH CLASSROOM 1608 could not be moved out of view or without the chain posing a hazard!

Case #: 161
Notes: every time I've needed equipment, fortunately very rarely, it has been nothing but a big hassle- people were rude and unfriendly

Case #: 164
E.1: (5) new projector screens in our lab
Notes: I don't use media services a lot, but there are times when your services are very valuable in my teaching. In general, I've had good experiences with media services personnel, and think they should be commended for their efforts towards better instruction at UCD.
I wish we had a real person in the NORTH CLASSROOM satellite center instead of a phone

Case #: 165
E.1: (5) computer overhead projector
Notes: B.3: cost too high
I do all multimedia/[?]/[?] myself because your push high costs

Case #: 167
E.1: higher quality overhead projector in SCIENCE Bldg.

Case #: 168
E.1: (5) slide projector
Notes: A.15: how about professional slide-making services/graphics that don't cost a fortune

Case #: 170
E.1: (5) computers & CD ROM

Case #: 171
E.1: update of equipment in SCIENCE 108

Case #: 173
E.1: laser video disk equipment for presenting multi-media instruction
E.2: (5) true multi-media facilities
Notes: B.3: burned out bulbs result in replacing overhead w/ inferior product instead of simply a new bulb. Happened both in NORTH CLASSROOM and CENTRAL CLASSROOM

Case #: 174
Notes: C.9: I don't "plan" this use

Case #: 180
E.1: more classes in NORTH CLASSROOM w/ good quality
sound systems for film screenings
E.2: VCR with more reliable pause buttons & with time counters
E.3: a larger collection of videos & films as well as another mobile Sharp projector
Notes: B.2: it depends
B.3: I like all the people but believe they don't get adequate funding to maintain & improve equipment

Case #: 182
E.1: (3) remote location (off-campus) teleconferencing for instruction

Case #: 188
E.1: (5) IBM LCD projector
E.2: multi-media production workstation

Case #: 190
E.1: (4) the main need is not to have to pick things up away from the classroom

Case #: 191
E.1: (5) various VCR instructional tapes

Case #: 193
E.1: 35mm slide projector & VCR w/ monitor in WEST CLASSROOM 1st floor
E.2: south (no elevator access-one must go outside with carts)
Case #: 194
Notes: I strongly feel that we need to begin developing for the very near future when telecommunications will be a major form of information exchange
C: As a part-time composition teacher, I won't need services offered. As library personnel, I will be encouraging my supervisor to consider these important services

Case #: 196
E.1: (5) more overhead projectors, TVs, and VCRs

Case #: 197
E.1: (5) a media equip. room in SCIENCE BUILDING
E.2: (5) enough keys for TRAMWAY equip. room
Notes:

Case #: 198
E.1: (5) D.6
E.2: (5) D.13

Case #: 199
E.1: (5) up-to-date films, VCRs, etc
E.2: (5) VCR and TV programs for classroom use

Case #: 202
E.1: (5) each of the 3 schools working together to avoid duplicating resources
Notes:

Case #: 203
Notes: *((1. respondent wrote in "0. Never" for question 1 and left the rest of questionnaire blank))*

Case #: 206
E.1: more videos like "Women & Social Actions" Orlando said budget was used up

Case #: 209
E.1: (4) microphone
E.2: (3) podium(full height)
E.3: (5) laser pointer

Case #: 212
E.1: (5) better LCD panel/projector

Case #: 213
E.1: (5) More(at least 2-4) slide projectors
which are larger, heavier made to
withstand heated slides for longer periods
E.2: an opaque projector

Case #: 214
E.1: (4) computer screen projector
E.2: (4) portable overhead projector
E.3: (5) updated video cassette programs

Case #: 215
E.1: (5) CD ROM

Case #: 216
E.1: 35mm slide viewers 32 units need Hahnel Diaport AM1000
E.2: $249 for BIOLOGY 108, to replace caramates
Notes: E.2: caramates to be reserved for use in self paced courses where both audio tapes & slides used

Case #: 220
Notes: I really can't respond to this. I've not used the Center-except once or twice for a monitor/VCR

Case #: 222
Notes: A.15: CD ROM- Psychology lit available via VAX/modem

Case #: 226
Notes: B.1 & B.2 (3): I used the center when I taught Sociology 101
[[NOTE: this respondent answered1 to everything, except in section B; also, even answered"1" without specifying on "other" items]]

Case #: 228
E.1: slide projectors

Case #: 232
Notes: B.3: We need video equipment in more classrooms, especially when getting the equipment to a classroom necessitates transporting the equipment outside
C. [regarding questions 2,5,6,9,10,12,14] I am not sure what you are asking here?
[end of form]: I am sure I have not been very helpful. For one thing, I am not very computer-literate. If I would take the time to learn, I suspect I would use it quite a bit, as I do video & film when necessary.

Case #: 233
Notes: B.1: (5) NORTH CLASSROOM - Dave
B.3: Fall Semester '93 I made arrangements for all media commitments. They were "lost" or fell through the cracks (main media office in the library).

Case #: 236
E.1: (4) access to mediated classrooms with excellent equipment
Notes: B.1: Greg has been especially helpful to me, and so has the woman in the ARTS equipment distribution center

Case #: 239
E.1: interactive classroom /individual students linked by computer with uplink/downlink capability
Notes: 1. generally but not specifically
A.15: interactive capabilities
C: don't know no immediate plans. But I do expect to do some over next 2-3 years

Case #: 240
E.1: (5) overhead display for mathematics
software
Notes:

Case #: 244
Notes: B.3: can you update the VCRs so they have counters on them?
D: I might use these other options if I knew how

Case #: 247
Notes: E.1: using media in the science building is a BIG problem-to have to go to the library is a terrible inconvenience and often precludes the use of such because of time factors

Case #: 248
E.1: (5) overhead projectors that work

Case #: 249
Notes: A.15: maintenance of in class transparency projectors

Case #: 251
E.1: (5) It would be nice to know what you have and accessibility
E.3: (5) video prod. capability
Notes: B.3: Every attempt to use or utilize MCS video production department, is a JOKE., I've had to go to more expensive, outside services, but willing to pay because of the lack of cooperation of MCS
C.15: Do you turn & use your equipment?
re: 1: (almost never) our experience with MCS & staff have and continues to be an ongoing disappointment. With their hi-tech video equipment capabilities, they have the facilities & equipment, but they lack cooperation & helpfulness, Every attempt to use their services has always been turned down. It is very convenient & useful equipment, but when you don't even turn on the equipment, it seems like such a waste of taxpayers money. It's a good thing Paula Woodward doesn't know of your reputation

Case #: 253
E.1: (5) better VCRs & more video
E.2: (5) laser disk equipment

Case #: 254
E.1: (5) video projector

Case #: 255
E.1: (5) on site training of equip,
E.2: (5) more training your location
E.3: (4) handouts on Media services

Case #: 256
Notes: B.3: equipment quality-e.g.. VCR, OHs etc; 1(poor)

Case #: 263
E.1: (5) zap shot camera
E.2: (5) laser disk player
E.3: (5) laser disk education collection

Case #: 267
E.1: (3) VCR in dept. for newscasts

Case #: 268
Notes: B.3: except difficulty in getting VCRs to classroom

Case #: 270
E.1: (5) access to WEST CLASSROOM 1st floor;5
E.2: (5) more accessible equipment stations

Case #: 271
E.1: (5) chalk in classrooms
Notes: at unpredictable times (3 times this semester) there is no chalk in TRAMWAY room 103-do I provide my own?

Case #: 273
E.1: (4) small(@13")TV w/built in VCR mainly for previewing videos
E.2: (4) video/data projector w/notebook to avoid use of cart
E.3: (4) type DOS computer that is light equipment delivered & picked up by Media Services

Case #: 274
E.1: (5) high quality (audio & video) TV, relatively foolproof, can show subtitles
E.2: (5) high quality VCR precisely cueable
E.3: (5) maps - high quality RECENT videos - many outdated in my field - BASIC reliable equipment & service - until this is available I think it is ridiculous to consider anything more complex & expensive or high tech
Notes: B.1. Some yes, some no
B. We don't have consistently reliable basics right now - large enough screen TV which can show video w/ subtitles & reliably functioning equipment - good volume & tone quality etc.- I've encountered many basic problems with equipment service
D. When I have used movies, projector is so noisy & projected size in classroom so small that I've quit using

Case #: 276
Notes: C. *((*"Sometimes?" *[over* "often"*] on semantic differential))*

Case #: 278
Notes: B.3. Emergency help - overhead had to be replaced during class

Case #: 279
E.1: (5) ability to copy existing media with more ease

Section E and Open Comments: Frequency of keyword text

This table (3 pages) covers the frequency of selected key words occurring in the raw text of comments in Sec and extraneous comments on the Faculty Service Questionnaire.*

Keyword Table: page 1 of 3

Keyword text in alphabetical order (with frequency of occurrence)	Keyword text in order of most frequent occurrence
35mm slide viewer: 1	39: equip(ment)
architecture: 1	37: video
arts: 6	37: classroom
ARTS 186: 1	28: projector
ARTS 273: 1	27: VCR
audio: 6	27: media
audio tapes: 2	24: equipment
BIOLOGY 108: 1	14: service
books: 1	14: overhead
building: 6	14: CD
camcorder: 1	13: TV
carts: 1	13: rooms
cassette: 3	13: computer
cassette recorders: 1	11: services
catalog: 2	10: screen
CD: 14	10: film
CD ROM: 5	9: tape
CD-Rom: 4	9: Rom
center: 9	9: laser
CENTRAL CLASSROOM: 1	9: center
CLASSROOM: 37	8: videos
classroom: 37	8: SCIENCE
close caption: 2	8: rec
computer: 13	8: quality
conferences: 1	8: NORTH CLASSROOM
converter: 1	7: West Classroom
copy: 2	7: player
disc: 4	7: overhead projector
display: 3	6: tapes
Easel: 1	6: slides
education: 4	6: personnel
equip: 39	6: multi
equipment: 24	6: monitor
film: 10	6: building
film rentals: 1	6: audio
graphics: 2	6: arts
hassle: 1	5: Slide projector
histology: 1	5: library
history: 3	5: CD ROM
	4: system

* The only useful purpose of examining the frequency of key word text is to acquire a basic premise about the amount of attention given to certain topics by the respondents.

Keyword Table: page 2 of 3

Keyword text in alphabetical order (with frequency of occurrence)	Keyword text in order of most frequent occurrence
images: 1	4: student
information: 2	4: sharp
laser: 9	4: media center
laser disc: 4	4: LCD
laser disc player: 3	4: laser disc
LCD panel: 2	4: education
laser pointer: 1	4: disc
LCD: 4	4: CD-Rom
library: 5	3: TRAMWAY
linotronic: 1	3: portable
Macs: 1	3: multimedia
maps: 1	3: MCS
MCS: 3	3: laser disc player
media: 27	3: history
media center: 4	3: display
microphone: 1	3: cassette
modem: 1	2: West Classroom 146
money: 1	2: tech
monitor: 6	2: subtitles
movies: 2	2: remote
multi: 6	2: projection
multi-media: 2	2: print
multimedia: 3	2: portable overhead projector
NORTH CLASSROOM: 8	2: phone
NORTH CLASSROOM 1535: 2	2: NORTH CLASSROOM 1535
NORTH CLASSROOM 1608: 1	2: multi-media
overhead: 14	2: movies
overhead projector: 7	2: LCD panel
personnel: 6	2: information
phone: 2	2: graphics
PHYSCIAL EDUCATION bldg: 1	2: copy
player: 7	2: close caption
podium: 1	2: catalog
portable: 3	2: audio tapes
portable overhead projector: 2	2: 112
print: 2	1: workshops
projection: 2	1: workers
projector: 28	1: WEST CLASSROOM 261
quality: 8	1: video camcorder
radio: 1	1: VAX
rec: 8	1: transparency
remote: 2	1: TRAMWAY BUILDING
Rom: 9	1: teleconferencing
rooms: 13	1: technology
scanning: 1	1: SOUTH CLASSROOM

Keyword Table: page 3 of 3

Keyword text in alphabetical order (with frequency of occurrence)	Keyword text in order of most frequent occurrence
SCIENCE: 8	1: sound system
SCIENCE 104: 1	1: Sociology 101
screen: 10	1: self paced course
screenings: 1	1: screenings
self paced course: 1	1: SCIENCE 104
service: 14	1: scanning
services: 11	1: radio
sharp: 4	1: podium
Slide projector: 5	1: PHYSCIAL EDUCATION bldg
slides: 6	1: NORTH CLASSROOM 1608
Sociology 101: 1	1: money
sound system: 1	1: modem
SOUTH CLASSROOM: 1	1: microphone
student: 4	1: maps
subtitles: 2	1: Macs
system: 4	1: linotronic
tape: 9	1: laser pointer
tapes: 6	1: images
tech: 2	1: histology
technology: 1	1: hassle
teleconferencing: 1	1: film rentals
TRAMWAY: 3	1: Easel
TRAMWAY BUILDING: 1	1: converter
transparency: 1	1: conferences
TV: 13	1: CENTRAL CLASSROOM
VAX: 1	1: cassette recorders
VCR: 27	1: carts
video: 37	1: camcorder
video camcorder: 1	1: books
videos: 8	1: BIOLOGY 108
West Classroom: 7	1: ARTS 273
West Classroom 146: 2	1: ARTS 186
WEST CLASSROOM 261: 1	1: architecture
workers: 1	1: 35mm slide viewer
workshops: 1	

Section E and Open Comments: Re-grouping of selected text according to categories. Only constructs with the frequency of three (3) or more occurrences are included.

Equipment	Facilities	Media/MultiMedia	Products/Services
39: equipment	37: classroom	27: media	37: video
28: projector	13: rooms	14: CD	14: services
27: VCR	9: center	9: CD Rom	10: film
24: equipment	8: Science	9: laser	9: tape
14: overhead	8: North Classroom	8: videos	8: quality
13: TV	7: West Classroom	6: slides	6: personnel
13: computer	6: building	6: tapes	4: student
10: screen	6: arts	6: multi	4: education
7: player	5: library	6: audio	3: history
7: overhead projector	4: system	4: disc	
6: monitor	4: media center	4: laser disc	= 95
5: Slide projector	3: TRAMWAY	3: multimedia	[roughly 18%]
4: sharp	3: MCS		
4: LCD		= 102	
3: portable	= 113	[roughly 20%]	
3: laser disc player	[roughly 22%]		
3: display			
3: cassette			
= 213			
[roughly 40%]			

ALL: Section A (in descending order of mean scores)

	Mean	Count	# Missing
Maintenance and repair of equipment	4.67	274	6
Checking out media equipment	4.62	274	6
Installation of media/data presentation equipment in selected classrooms	4.41	267	13
Film and video checkout and/or rental	4.40	270	10
Design and production of instructional materials (graphics, video, overhead transparancies, computer-based instruction)	3.71	267	13
Making copies of existing media (audio or video cassettes)	3.67	263	17
Recording off-air and satellite transmitted video programs	3.35	263	17
Analysis, design, and/or evaluation of instructional media	3.33	263	17
Design and development of computer-assisted instruction	3.33	261	19
Video or fiber optic delivery systems	3.29	251	29
Multimedia (CD-ROM) authoring and mastering	3.25	256	24
Equipment consultation and systems design	3.20	254	26
Sending and/or receiving interactive teleconferences	3.12	260	20
Distance education consultation and production	3.04	251	29

ALL: Section C (in descending order of mean scores)

	Mean	Count	# Missing
Checking out media equipment	3.90	270	10
Film and video checkout and/or rental	3.71	268	12
Maintenance and repair of equipment	3.54	244	36
Installation of media/data presentation equipment in selected classrooms	3.42	253	27
Making copies of existing media (audio or video cassettes)	2.76	258	22
Design and production of instructional materials (graphics, video, overhead transparancies, computer-based instruction)	2.62	261	19
Analysis, design, and/or evaluation of instructional media	2.19	257	23
Recording off-air and satellite transmitted video programs	2.13	255	25
Multimedia (CD-ROM) authoring and mastering	2.12	249	31
Design and development of computer-assisted instruction	2.06	257	23
Equipment consultation and systems design	2.02	252	28
Video or fiber optic delivery systems	1.96	247	33
Sending and/or receiving interactive teleconferences	1.86	253	27
Distance education consultation and production	1.85	249	31

UCD: Section A (in descending order of mean scores)

	Mean	Count	# missing
Checking out media equipment	4.80	107	2
Maintenance and repair of equipment	4.66	107	2
Film and video checkout and/or rental	4.39	105	4
Installation of media/data presentation equipment in selected classrooms	4.38	103	6
Design and production of instructional materials (graphics, video, overhead transparancies, computer-based instruction)	3.70	103	6
Making copies of existing media (audio or video cassettes)	3.57	102	7
Design and development of computer-assisted instruction	3.32	100	9
Recording off-air and satellite transmitted video programs	3.29	99	10
Video or fiber optic delivery systems	3.28	97	12
Multimedia (CD-ROM) authoring and mastering	3.24	97	12
Equipment consultation and systems design	3.19	96	13
Distance education consultation and production	3.14	95	14
Analysis, design, and/or evaluation of instructional media	3.13	101	8
Sending and/or receiving interactive teleconferences	3.09	100	9

UCD: Section C (in descending order of mean scores)

	Mean	Count	# missing
Checking out media equipment	3.87	103	6
Film and video checkout and/or rental	3.58	102	7
Maintenance and repair of equipment	3.53	88	21
Installation of media/data presentation equipment in selected classrooms	3.40	93	16
Making copies of existing media (audio or video cassettes)	2.70	99	10
Design and production of instructional materials (graphics, video, overhead transparancies, computer-based instruction)	2.54	100	9
Multimedia (CD-ROM) authoring and mastering	2.12	95	14
Analysis, design, and/or evaluation of instructional media	2.04	98	11
Recording off-air and satellite transmitted video programs	2.03	97	12
Design and development of computer-assisted instruction	2.00	98	11
Distance education consultation and production	1.96	95	14
Equipment consultation and systems design	1.95	95	14
Video or fiber optic delivery systems	1.95	92	17
Sending and/or receiving interactive teleconferences	1.83	96	13

MSCD: Section A (in descending order of mean scores)

	Mean	Count	# missing
Maintenance and repair of equipment	4.68	130	4
Checking out media equipment	4.55	130	4
Installation of media/data presentation equipment in selected classrooms	4.51	129	5
Film and video checkout and/or rental	4.42	130	4
Design and production of instructional materials (graphics, video, overhead transparancies, computer-based instruction)	3.71	129	5
Making copies of existing media (audio or video cassettes)	3.71	126	8
Analysis, design, and/or evaluation of instructional media	3.46	127	7
Recording off-air and satellite transmitted video programs	3.36	129	5
Video or fiber optic delivery systems	3.32	120	14
Design and development of computer-assisted instruction	3.29	127	7
Multimedia (CD-ROM) authoring and mastering	3.22	125	9
Equipment consultation and systems design	3.18	125	9
Sending and/or receiving interactive teleconferences	3.08	126	8
Distance education consultation and production	2.98	124	10

MSCD: Section C (in descending order of mean scores)

	Mean	Count	# missing
Checking out media equipment	4.00	133	1
Film and video checkout and/or rental	3.86	132	2
Maintenance and repair of equipment	3.68	124	10
Installation of media/data presentation equipment in selected classrooms	3.54	127	7
Making copies of existing media (audio or video cassettes)	2.85	125	9
Design and production of instructional materials (graphics, video, overhead transparancies, computer-based instruction)	2.69	127	7
Analysis, design, and/or evaluation of instructional media	2.26	125	9
Recording off-air and satellite transmitted video programs	2.17	125	9
Multimedia (CD-ROM) authoring and mastering	2.11	122	12
Equipment consultation and systems design	2.06	124	10
Design and development of computer-assisted instruction	2.04	126	8
Video or fiber optic delivery systems	1.98	123	11
Sending and/or receiving interactive teleconferences	1.81	125	9
Distance education consultation and production	1.80	122	12

CCD: Section A (in descending order of mean scores)

	Mean	Count	# missing
Maintenance and repair of equipment	4.65	37	0
Checking out media equipment	4.38	37	0
Film and video checkout and/or rental	4.34	35	2
Installation of media/data presentation equipment in selected classrooms	4.14	35	2
Making copies of existing media (audio or video cassettes)	3.77	35	2
Design and production of instructional materials (graphics, video, overhead transparancies, computer-based instruction)	3.74	35	2
Design and development of computer-assisted instruction	3.53	34	3
Recording off-air and satellite transmitted video programs	3.51	35	2
Analysis, design, and/or evaluation of instructional media	3.49	35	2
Multimedia (CD-ROM) authoring and mastering	3.38	34	3
Sending and/or receiving interactive teleconferences	3.32	34	3
Equipment consultation and systems design	3.30	33	4
Video or fiber optic delivery systems	3.24	34	3
Distance education consultation and production	2.97	32	5

CCD: Section C (in descending order of mean scores)

Sorted descending by mean score	Mean	Count	# missing
Checking out media equipment	3.56	34	3
Film and video checkout and/or rental	3.53	34	3
Installation of media/data presentation equipment in selected classrooms	3.03	33	4
Maintenance and repair of equipment	3.03	32	5
Design and production of instructional materials (graphics, video, overhead transparancies, computer-based instruction)	2.62	34	3
Making copies of existing media (audio or video cassettes)	2.62	34	3
Analysis, design, and/or evaluation of instructional media	2.41	34	3
Design and development of computer-assisted instruction	2.33	33	4
Recording off-air and satellite transmitted video programs	2.27	33	4
Multimedia (CD-ROM) authoring and mastering	2.16	32	5
Sending and/or receiving interactive teleconferences	2.16	32	5
Equipment consultation and systems design	2.12	33	4
Video or fiber optic delivery systems	1.91	32	5
Distance education consultation and production	1.75	32	5

All: Rankings for Section D

Item	Mean	Std. Dev.	Count	# Missing	Median	Mode
Overhead Projector	2.62	.69	270	10	3	2
Video Cassette Recorder	2.62	.66	274	6	3	2
TV Receiver/Monitor	2.59	.70	264	16	3	2
Slide Projector	2.04	.86	258	22	2	1
Campus TV Dist. Syst.	1.88	.88	250	30	2	1
Video/data projector/monitor	1.87	.79	234	46	2	1
Audio Cassette Rec/Play.	1.86	.83	252	28	2	1
Video Camcorder	1.79	.75	254	26	2	1
LCD Panel	1.73	.74	246	34	2	1
Movie Projector	1.63	.78	241	39	1	1
CD-ROM Equipment	1.62	.65	248	32	2	1
CD Player (audio)	1.62	.71	246	34	1	1
CD-Interactive	1.48	.60	230	50	1	1
Opaque Projector	1.43	.64	238	42	1	1

UCD: Rankings for Section D

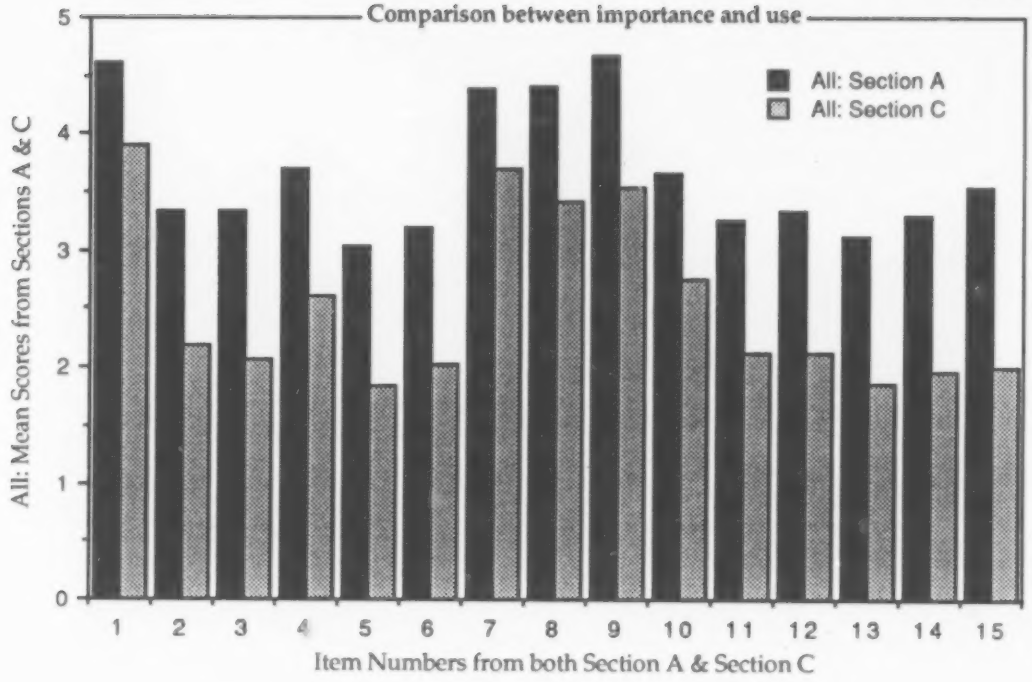
Item	Mean	Std. Dev.	Count	# Missing	Median	Mode
Overhead Projector	2.71	.62	104	5	3	2
Video Cassette Recorder	2.64	.60	106	3	3	2
TV Receiver/Monitor	2.56	.70	99	10	3	2
Slide Projector	2.12	.84	97	12	2	1
Video/data projector/monitor	1.84	.79	90	19	2	1
Audio Cassette Rec/Play.	1.79	.81	95	14	2	1
Video Camcorder	1.76	.76	96	13	2	1
LCD Panel	1.73	.75	96	13	2	1
CD Player (audio)	1.66	.71	94	15	2	1
Movie Projector	1.65	.77	91	18	1	1
Campus TV Dist. Syst.	1.65	.81	91	18	1	1
CD-ROM Equipment	1.56	.64	98	11	1	1
Opaque Projector	1.41	.63	90	19	1	1
CD-Interactive	1.38	.55	89	20	1	1

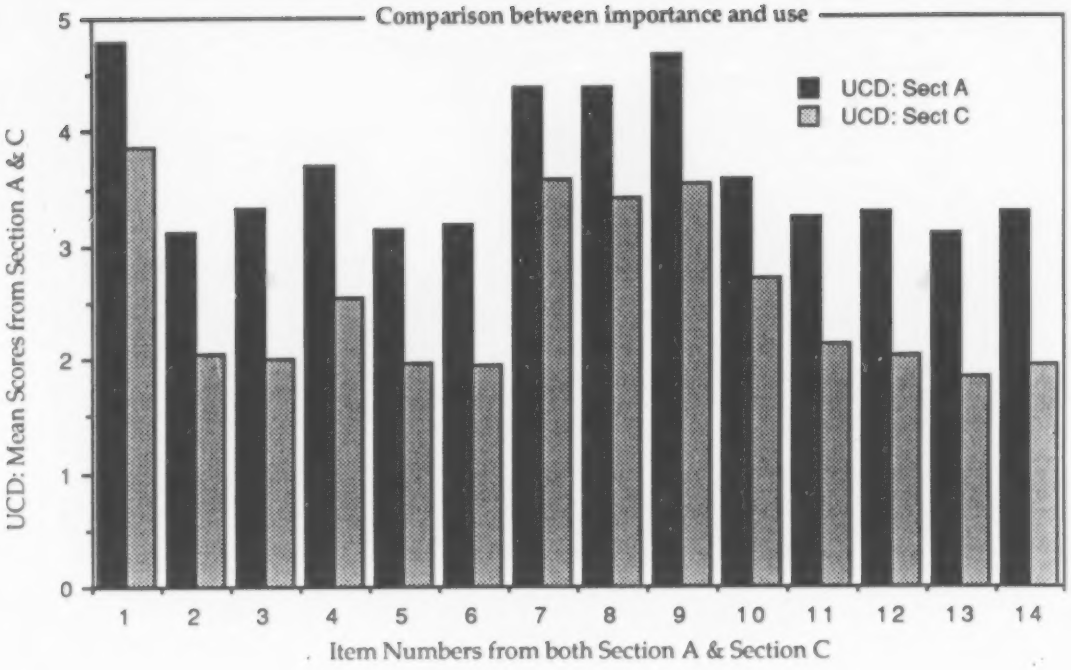
MSCD: Rankings for Section D

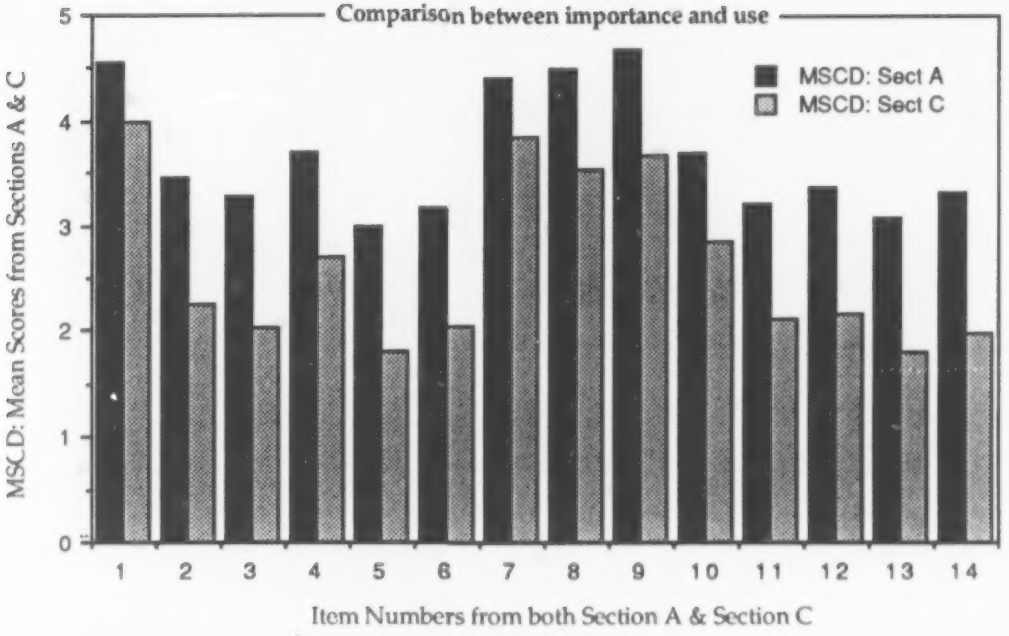
Item	Mean	Std. Dev.	Count	# Missing	Median	Mode
TV Receiver/Monitor	2.71	.62	129	5	3	2
Video Cassette Recorder	2.68	.66	131	3	3	•
Overhead Projector	2.60	.72	131	3	3	1
Campus TV Dist. Syst.	2.08	.89	125	9	2	1
Slide Projector	2.06	.86	127	7	2	1
Audio Cassette Rec/Play.	1.98	.85	123	11	2	1
Video/data projector/monitor	1.91	.82	113	21	2	1
Video Camcorder	1.76	.76	121	13	2	1
LCD Panel	1.70	.74	118	16	2	1
Movie Projector	1.66	.81	116	18	1	1
CD-ROM Equipment	1.64	.65	116	18	2	1
CD Player (audio)	1.61	.73	119	15	1	1
CD-Interactive	1.51	.63	109	25	1	1
Opaque Projector	1.43	.62	116	18	1	1

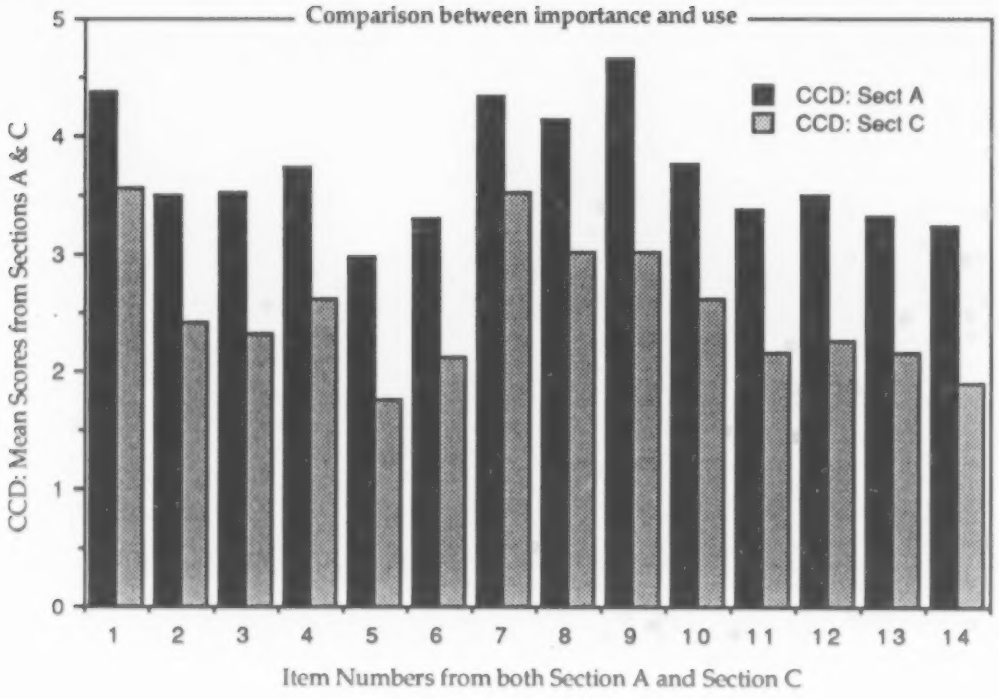
CCD: Rankings for Section D

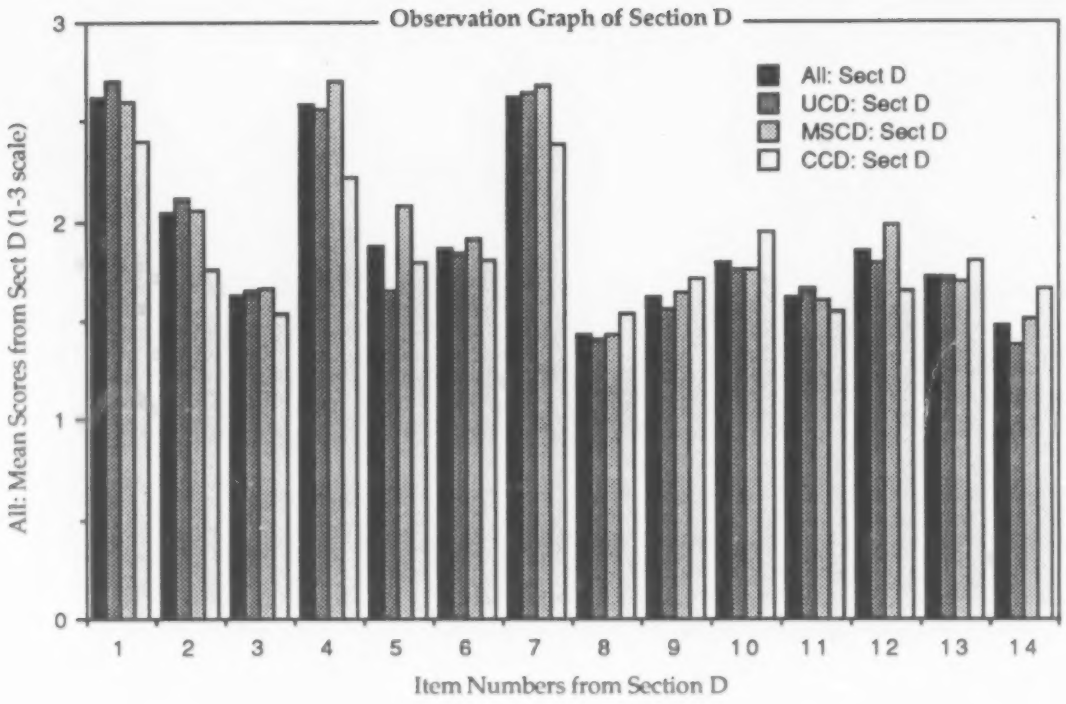
Item	Mean	Std. Dev.	Count	# Missing	Median	Mode
Overhead Projector	2.40	.77	35	2	3	2
Video Cassette Recorder	2.38	.79	37	0	3	2
TV Receiver/Monitor	2.22	.87	36	1	2.50	1
Video Camcorder	1.95	.70	37	0	2	2
Video/data projector/monitor	1.81	.70	31	6	2	2
LCD Panel	1.81	.74	32	5	2	2
Campus TV Dist. Syst.	1.79	.88	34	3	1.50	1
Slide Projector	1.76	.89	34	3	1	1
CD-ROM Equipment	1.71	.68	34	3	2	2
CD-Interactive	1.66	.60	32	5	2	2
Audio Cassette Rec/Play.	1.65	.73	34	3	1.50	1
CD Player (audio)	1.55	.67	33	4	1	1
Movie Projector	1.53	.71	34	3	1	1
Opaque Projector	1.53	.76	32	5	1	1


Comparison between importance and use
All: Section A
All: Section C
All: Mean Scores from Sections A & C
0
1
2
3
4
5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Item Numbers from both Section A & Section C


Comparison between importance and use
UCD: Sect A
UCD: Sect C
UCD: Mean Scores from Section A & C
0
1
2
3
4
5
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Item Numbers from both Section A & Section C


Comparison between importance and use
MSCD: Sect A
MSCD: Sect C
MSCD: Mean Scores from Sections A & C
0
1
2
3
4
5
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Item Numbers from both Section A & Section C


Comparison between importance and use
CCD: Sect A
CCD: Sect C
CCD: Mean Scores from Sections A & C
0
1
2
3
4
5
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Item Numbers from both Section A and Section C


Observation Graph of Section D
All: Sect D
UCD: Sect D
MSCD: Sect D
CCD: Sect D
All: Mean Scores from Sect D (1-3 scale)
3
2
1
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14
Item Numbers from Section D

D. Please circle the appropriate number indicating how you might use various equipment:

Item	I use	I would use	I don't need
1. Overhead projector	3	2	1
2. Slide projector	3	2	1
3. Movie projector	3	2	1
4. TV receiver/monitor	3	2	1
5. Campus-wide TV distribution system	3	2	1
6. Video/data projector or video/data monitor	3	2	1
7. VCR (Video cassette recorder/player)	3	2	1

Item	I use	I would use	I don't need
8. Opaque projector	3	2	1
9. CD-ROM equipment	3	2	1
10. Video camcorder	3	2	1
11. CD player (audio)	3	2	1
12. Audio cassette recorder/player	3	2	1
13. LCD panel (computer screen projector)	3	2	1
14. CD-I (interactive CD equipment)	3	2	1

What do Auraria Faculty *Really* Want and Need?

A Systematic Approach
to Thinking About Faculty Needs at the
Auraria Media Center

January 12, 1994

NEED: A *gap* between "what is" (actuals) and "what should be" (optimals)

NEEDS ASSESSMENT:

1. determining *gaps* between current results and desired results
2. a systematic study of missed opportunities (problems or innovations)

PURPOSE: are there things we could be doing, or things we can acquire, to narrow the *gaps* between "what is"and "what should be"?

1. make the best decisions on organizational objectives (optimals)
2. make decisions on what we need to do to achieve optimal results
3. evaluate results based on pre-determined criteria
4. better understand our clients needs and desires

APPROACHES: get information and opinions about *gaps* from varied sources

1. *interviews*
2. observation(s)
3. **survey(s)**
4. *focus groups*
5. consult experts
6. other...

KINDS OF INFORMATION NEEDED:

— External: points of view from outside the organization (i,e. Auraria Faculty & Staff)

— Internal: points of view from within the organization (AMC personnel)

1. "what is" (actuals):
   - what knowledge, skills, or attitudes affect our current performance (positively/negatively)?
   - what facilities or equipment deficiencies exist?
   - which procedures are efficient/inefficient?

2. "what should be" (optimals):
   - what knowledge, skills, or attitudes are required to approach optimal results?
   - what will additional facilities or equipment achieve?
   - which procedures should be changed or initiated

3. Feelings:
   - how do people feel about actuals, optimals, and a change process
   - how do we want people to feel...
   - how will people feel under given conditions

4. Causes:
   - describe problems or opportunities from multiple perspectives to determine why *gaps* exist

5. Solutions:
   - describe possible solutions from multiple perspectives to determine what to do next...

EXAMPLE SOLUTIONS:

— what we learn from the needs assessment may help serve as a basis for setting Media Center objectives

1. procedural problems or opportunities: external or internal
   - absence of knowledge or skill may require additional education or training
   - may require new procedures

2. environmental problems or opportunities: internal physical or mental
   - may require new equipment
   - may require facilities upgrade
   - may require new policies
   - may require morale boosters or new/different incentives

BASIC FORMULA:

OPTIMALS
— ACTUALS
= **NEEDS** (the nature of the problem or opportunity)

(and other needs must also be satisfied, for example feelings)

Resources

Kaufman, Roger, *et al.* (1981). "Relating Needs Assessment, Program Development, Implementation, and Evaluation," in *Journal of Instructional Development*. Vol. 4, No. 4. pp.17-26.

Rosset, Allison (1987). *Training Needs Assessment*. Educational Technology Publications: Englewood Cliffs, New Jersey.

<<insert logo here>>

February 9, 1994

Friends and Colleagues:

We need your help!

As you know, the Auraria Media Center will be conducting a needs assessment of campus faculty. This assessment is designed to help us get constructive ideas of what we can and should be doing to better serve their needs.

Phase one in this process, however, is to get feedback from our own staff regarding what we believe campus faculty *really* want and need. Each of you is the expert with respect to your products or services, so we are asking that you address those needs and problems that pertain to working with faculty in your department. We would prefer to have a conversation with each of you in person, however, that may not be feasible. Therefore, we have attached a summary of the assessment process (blue sheet) and a short question list (yellow sheet) for your convenience.

Take some time to think about your contribution. You may even wish to discuss this with other co-workers. Joseph will be contacting many of you for related informal chats and encourages everyone to contact him in person or by telephone (556-3548).

Your contributions are valued. Please return the completed question list (yellow sheet) by Friday, February 17 to Joseph at Campus Box 101, or his mail box in the Media Center front office.

Thanks,

Muriel Woods
AMC Director

Joseph Martinez
Instructional Designer

Enclosures:
Summary of Assessment Process (blue)
Question List (yellow)

What do Auraria Faculty *Really* Want and Need?

(This form will take about six minutes to complete. Use additional paper if needed.)

All worksites encounter changing needs and problems along the course of their history. These needs may also be missed opportunities, such as not doing some things that you feel your department should be doing. Sometimes these needs are readily satisfied or reduced. Other times they require additional assessment...

A. From your vantage point, please list what you see as one or two of the ***most important*** *current needs associated with the services provided for campus faculty by your department:*

Need 1:

Need 2:

B. Please explain what you believe are the reason(s) that these needs exist:

N- 1:

N- 2:

C. What do you believe are some possible solutions to these needs?

N- 1:

N- 2:

D. What are some obstacles to your suggested solutions?

N- 1:

N- 2:

Needs Assessment Comments
Auraria Media Center Personnel

Monday, February 21, 1994

TOPIC: Automation .....
– "Automation"
• comment: we need a long-term plan for automation

TOPIC: Computer-Based Instruction .....
-- we should lead the way in development of this
• reason: faculty are being asked to use computer-based instruction and we should be an asset to this need
• solution: continue to seek multimedia projects and keep updated with users & developers to determine needs
• obstacles: wide array of faculty projects, can't cover all; lack of funding

TOPIC: Equipment .....
-- 1 suggestion that we get newer equipment in MES to replace older equipment
• reason: faculty don't want to find out in class that they have a machine that doesn't work
• solution: $
• obstacles: $
-- make equipment easily accesible
• reason: used for classroom instruction
• solution: cabinets equipment with appropriate equipment in classroom
• obstacles: money
-- equipment needs to be trouble-free
• reason: needs of faculty exceed size of department; faculty complain that they can't get an answer on telephone
• solution: answering machine?, university policy concerning downsizing, hiring freeze, budget, etc. (i,e. hire more people)
• obstacles: Amendment 1, policy makers, budget

TOPIC: Facilities .....
-- modern video classroom
• reason: currently using marginal furniture & equipment
• solution: purchase new equipment
• obstacles: $
-- media center needs to be trouble-free
• reason: old, over used, over-repaired, high-mileage equipment (MP's, SL's) still in circulation but undependable. When equip goes to repair a shortage is created for late orders
• solution: new equipment is on the way; rotating equipment (e,g. Arts is high volume, demand for late orders)
• obstacles: problem solved for short term when new equipment arrives; attention should be given to arts "worn out" equipment

TOPIC: Faculty awareness of services .....
-- 1 suggestion that faculty need to know more about HOW our services can improve their teaching
• reason: until more recent (last 2-3 years) there was little exposure to faculty about our services
• solution: faculty should be rewarded for creating and using good media/multimedia; credit toward tenure (like publications)
• obstacles: money, time, people

-- what is required of faculty to use our services
- reason: there are few clients who use services regularly
- solution: rewards
- obstacles: money, time, people

-- promote color slide/overhead production
- reason: widely used in classroom
- solution: be able to produce quickly
- obstacles: slide generator is expensive

TOPIC: Faculty inspiration .....
-- faculty need to be convinced that media can add to the effectiveness of their instruction
- reason: most faculty are concerned that media development threatens job security; low incentives;
- solution: release time; get deans and faculty to try our services; present to faculty our perception of their needs and what solutions are
- obstacles: AMC has no control over time alloted to faculty for media involvement; higher level needs to be involved

TOPIC: Media Equipment Services .....
- comments: 1) MES should do internal assessment to determine # of orders for each type of equipment & current volume of equipment to fill orders; 2) we need to get more details on classroom equipment failures [how many, when, where]

TOPIC: Multimedia .....
-- 1 suggestion that we have a multimedia authoring room
- reason: new technology
- solution: development of multimedia platform with access for faculty use
- Obstacles: funding for staff & equipment

TOPIC: Outlook .....
-- we need to perceive ourselves as a vital contribution to the ongoing missions of the campus
- reason: we don't often give ourselves enough credit for being the experts
- solution: we need to collaborate with faculty on the most problems on campus
- obstacles:

TOPIC: Planning .....
- comment: we should not put systems into use unless they can be done "right"

TOPIC: Production Materials .....
-- overhead transparencies and slides for curriculum support
- reason: production of these should be expedient
- solution: purchase slide generator or work out feasible procedure for timely processing with outside source
- obstacles: slide generator is VERY expensive

TOPIC: Staffing .....
-- production staffing for evenings
- reason: coverage is currently done by students
- solution: hire full-time media specialist to cover evenings
- obstacles: $

TOPIC: Transmission/Reception .....
-- transmit & receive educational products from campus (with marketing support)
• reason: market forces are stiff competition; new technologies open new "paths" to students; new clients are unfamiliar with non-education work environments
• solution: earn reliable reputation; update studio capabilities; market services; gain administrative support
• obstacles: $; clients willing to take risks, low visibility

TOPIC: Videotaping .....
-- 1 suggestion that we have a need for location videotaping
• reason: to tape off-campus
• solution: additional equipment, additional funding, additional design and production
• obstacles: additional funding

TOPIC: Visibility .....
• comments: 1) people [faculty] still don't know we're here